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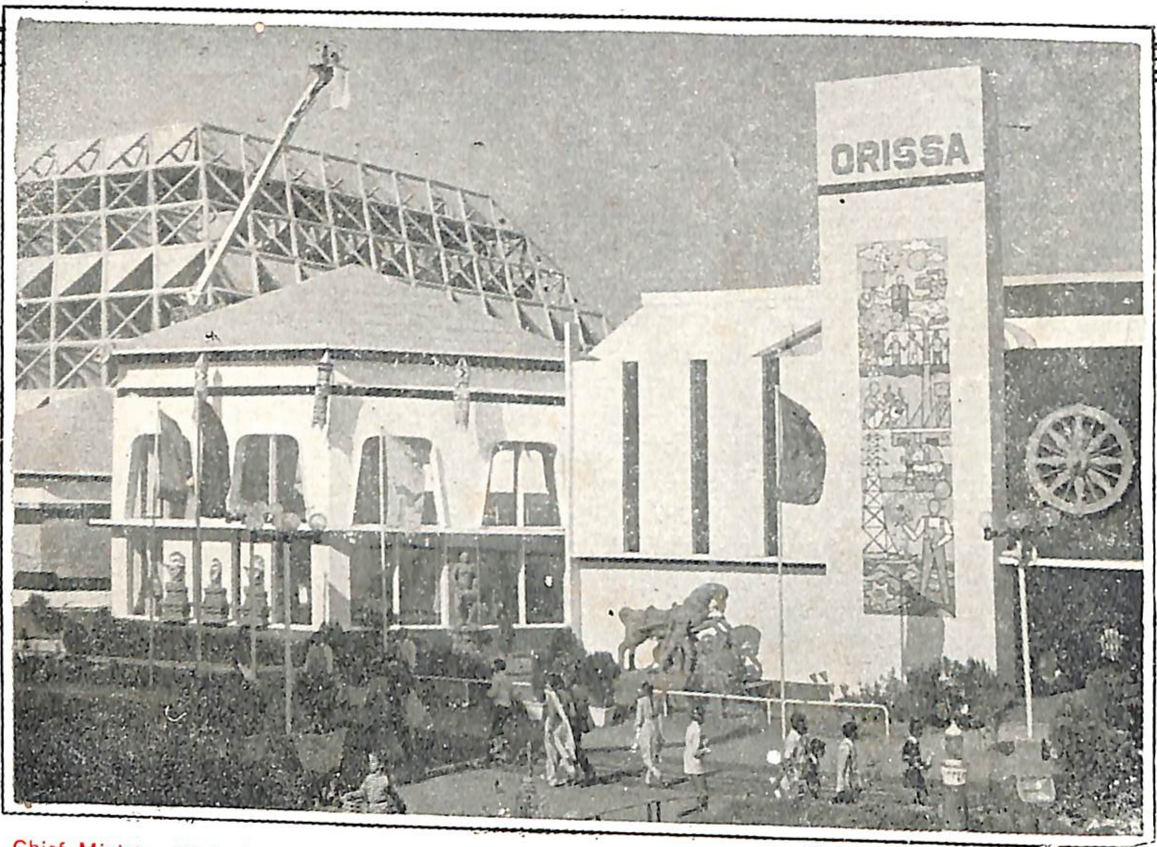
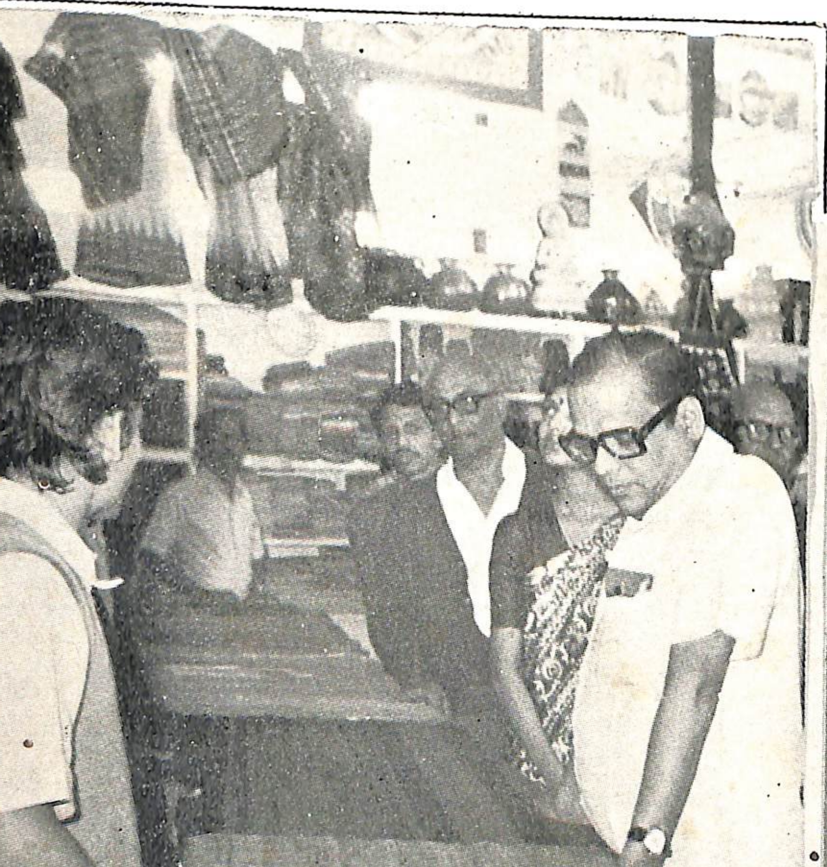
ORISSA REVIEW

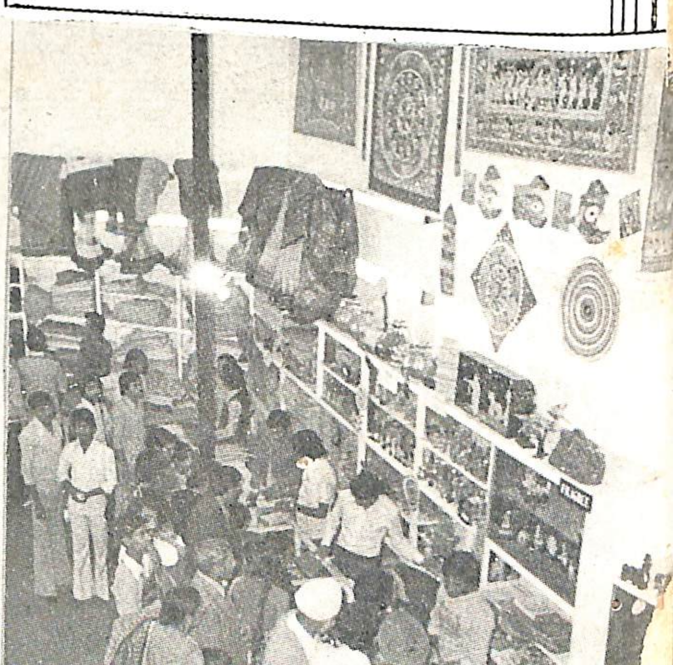


Orissa Pavilion exterior view

Chief Minister Shri J. B. Patnaik at the Handloom Sales Counter of Orissa Pavilion



Interested buyers from Handloom and Handicrafts Sales Counter of Orissa Pavilion



DURGAPUJA AND DASAHARA

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.....FOR OFFICIAL USE ONLY.....

OBER
82

ENGAGEMENTS

WEDNESDAY
27

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NOVEMBER
1982

ENGAGEMENTS

MONDAY
29

DECEMBER
1982

ENGAGEMENTS

SUNDAY
19

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OCTOBER
1982

ENGAGEMENTS

THURS
28

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ENGAGEMENTS

FRIDAY
29
DECEMBER
1982

OR OFFICIAL USE ONLY..

ENGAGEMENTS

SATURDAY
18

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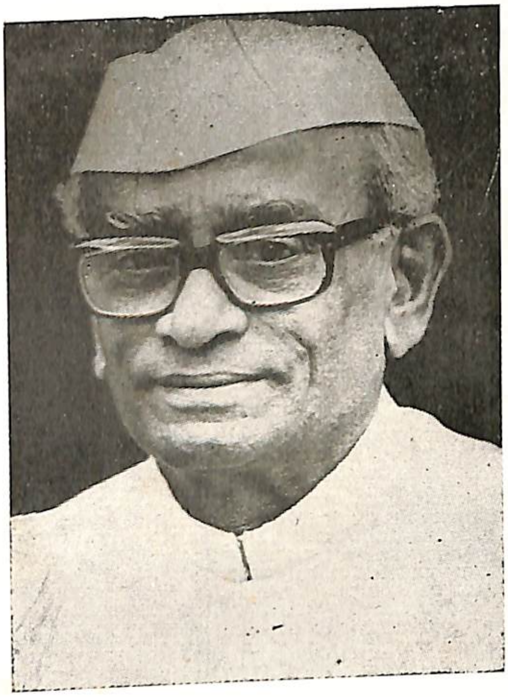

Shri N. Sanjiva Reddy
President of India

Shri C. M. Poonacha
Governor of Orissa

Shri J. B. Patnaik
Chief Minister of Orissa

Margsira-Pausa
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ORISSA REVIEW seeks to provide a condensed record of the activities and official announcements of the Government of Orissa and other useful information. Many items appear in summarised form. Such items should not be treated as complete and authoritative versions.

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National Unity and Solidarity

As the National Solidarity Day is getting celebrated today in a significant context, some important facts concerning our national unity and solidarity deserve our consideration. After many years of our independence there has been raised a secessionist demand on our borders in the East and the West. Some groups have taken recourse to terrorist activities in order to destroy the concept of national solidarity. From the pages of history, we can find that when Emperor Ashok dreamt about the unit of India, he had propagated it through his edicts on rocks in the bordering States. He knew it very well that defending the borders was most important and that could be done not alone by the Army but through understanding and an exchange of ideas. Hence the edicts of Ashok were addressed to the people inhabiting the border areas and it was announced therein time and again that they were the dear sons of the Emperor. Ashoka realised that the people living in India formed a nation and that was indivisible. Now, once again time has come when we should appreciate the worth of our national unity. We should rededicate ourselves to the cause of unity that Emperor Ashoka had so wisely propounded.

Geography has taken India as a single country. Snow-capped Himalayas are in the north. The south is washed by the blue waves of the Indian Ocean. The Bay of Bengal and the Arabian Sea are in the East and the West. The natural boundaries have invested India with the concept of oneness. Culture too has unified India. All-India languages have had their origin in Sanskrit and that has forged in a close link. The greatness and the universality of some characters of the Ramayan or the Mahavarat are the facts of life in all corners of India.

Even though, Geography and culture have taken India as a single country, political unity had rarely been established in the past. India had wavered between unity and diversity throughout its history. Emperor Ashoka's contribution to India was its political unity. After him Chandragupta-II was successful to a large extent in re-establishing it. Thereafter Akbar came on the scene and integrated India politically through his large-heartedness and patience. A few successful attempts had been made to unify India politically. Political unity in India was an exception, not the rule. Even though culturally India was one, because of political weakness and ignorance, many states which should have been within India stayed outside. This disunity was the cause of our subjugation. There was no lack of power or fighting spirit on the Indian soil. There was no dearth of poets, scholars, scientists and seers in our country. But India had courted bondage because of a lack of mass-consciousness and unity of her people. Therefore we have to realize that historic truth when we have gathered here to celebrate the day for unity and solidarity. We have to feel that these are needed for our existence as much as we are in need of air and water.

There are three specific conditions in which the national unity and solidarity can work. These are stability in politics and economics and an emotional integration. If we can work with dedication in these three fields, then national unity and solidarity will be feasible.

Independence has given us unity in political life. In the struggle for indeendence against the British Raj, the most ligible citizens from every region and every state had taken part. Many eminent scholars and great fighters, hailing from every part of India, from the Punjab to Madras, from the Baluchies and from Bengal had made a clean sacrifice of their lives in the fire that raged in our fight for freedom India was fortunate in the fact that Gandhiji was born here. He was the first to mobilize the people to carry on the fight united. If we look back, we may conclude that had not Gandhiji awakened our sense of national unity, we might have never achieved our independence. Gandhiji had taught us the secrets of unity. He taught us to realize that the massacre at Jaliwanabag was a national insult and national tragedy. The Jaliwanawala Day was celebrated throughout India. That taught the people about unity and solidarity. Similarly when people lost their all in the Great Earthquake of Bihar, Gandhiji was that great soul who made India feel the tragedy in Bihar. He taught the people to contribute their might to mitigate the suffering of the people of Bihar. For Gandhiji, the people of India came to realize that any regional mishap, political oppression or natural calamity had a national significance. He mobilized that sense of unity of the people and organised it as a force to carry on his war of non-violence against the British rule and turned out successful in the long run.

Pandit Nehru as a true successor of Gandhiji had enriched our national unity and solidarity with two great contributions. One was in politics and the other in economics. Nehru's monumental achievement in politics was the Constitution of India and its equally great counterpart in Economics was the Five-Year Plan. Socialism and economic progress through Planning are the symbols of Nehru's unique far-sight and nationalism. The Constitution of India has been the guideline of the Indian political life for the past 32 years. It is the kindly light bright and steady which has led millions of Indians through bad days and good. It has crossed many hurdles and impediments and is serving the people as a torch of liberty. It is a Federal Constitution and it envisages a strong centre with many states exercising quite a lot of powers on their own, independent of the centre. The success of the Constitution lies in the fact that it ensures the maintenance of an Ideal relationship between the centre and the State, the co-ordination of power, a proper distribution of the revenues and the utilisation of resources. This is the reason why there is stability in India in the sphere of politics. Hence we should show our allegiance and regard to our Constitution in every sphere of life.

Likewise planning too has helped our economy in its onward march towards prosperity and progress. In this vast country, there exists regional disparity in economic conditions. The cause is historical. In economic progress, Orissa has lagged behind. There are many states in India which are more advanced than Orissa in economic field. Through planning Pandit Nehru gave a new direction to the Indian economy in order to do away with this disparity. The aim of our planning is to make India a socialist country. And socialism entails an elimination of the economic disparity between man and man and between a region and another. Therefore for bringing about solidarity and unity in the country, it is a great step. We have to admit that in the wake of the Five Year Plans, this regional economic imbalance is gradually reduced.

Under the leadership of Prime Minister, Mrs. Indira Gandhi many revolutionary steps are being taken in this regard. After the nationalisation of the Banks there is no dearth of Capital to help the poorest among people to become self-reliant. We can provide examples from the case of Orissa regarding what has been done to reduce this disparity. We have decided to go in for heavy investment to pull Orissa up from the mire of poverty. Therefore, we have to appreciate the contribution of the First-five-year plans in upholding the unit and solidarity of India.

The third important point is emotional unit. Different politicians will form and organise there parties on an All-India level. But even within a political party, they should be motivated by a national feeling. Regional politics can never be the substitute of a national party. Sectarian attitude is bound to be submerged or washed out in the tidal current of national politics. One may utilize regional excitement for some time but it is temporary and short-lived.

Likewise in religion, that alone can exist and claim permanence which can bring integration in spiritual life. It is what is otherwise called 'Sanatan' or eternal. It gives respect to human values, not petty sectarian norms. Hence many religious currents have flowed down the fields of India from the days of the Pre-Aryan civilisation of Mahanjdaro and Harappa up to now. India has accepted, assimilated and integrated the different spiritual values and merged them into a way of life.

This emotional integration had been brought about by those sages and seers who had been loving India from the core of their hearts. It was Vyasa who had first used the word 'Bharat'. For him, those who had been born in India were fortunate. After him, we find the recurrence of the term 'Bharat' in Vayu Puran for the second time. It was in Vayu Puran wherein Bharat or India had been conceived for the first time as a country, and its people had been bestowed with a nationhood. Buddha towards the end of his life had said that the island of Jambu (India) was a beautiful country and the lives of its inhabitants were equally beautiful. Bharat or India has been described as an ideal country in Manu-Smriti. Poets in various regional languages have glorified Bharat. Tagore has addressed his soul to be awakened on the shores of Bharat or India, the birth place of great saints. He has taken India to be the original abode of great humanism. The Sakas, Huns, Mughals and Pathans, all had come here as invaders but had lost their identities in this great ocean of humanism. Subramaniyam, the Tamil poet too had sung about India, describing her as a single nation and a single country. Radhanath, the famous Oriya poet had bowed down to Bharata in his famous song 'Sarbesan' and had addressed her as mother. Radhanath had thought of Utkal as his mother while writing the song but recorded Bharat in place of Utkal. Further he had described Utkal as a petal of a lotus which was none other than India or Bharat. The song was composed for the occasion of the first protest day for the formation of a separate province of Orissa or Utkal. We have to understand the significance of this immortal song of a Great Oriya poet, who forgot his regional birth place but remembered the country where he was born in that frenzied mood of a prayer.

Therefore, we should strive for that emotional integration which had been emphasised time and again by the poets and the philosophers in the Upanishad and the Purans and which Gandhiji and Nehru had taught us in our life-time through their examples. We have an administration supported by a Constitution. A healthy tradition of democracy had been established and we have a strong and a powerful Government to rule the country. But despite the strong leadership, the heritage of a Constitution, political unity and economic progress, the need of the hour is an emotional integration. Hence the poets and intellectuals, the philosophers and Scientists should take a resolve that they should always think and strive for the attainment of national unity and carry the country forward. India is a country of the Hindus and

Muslims, Sikhas and Buddhists. This should be realized by every one.

Orissa is a small State but this too is an abridged edition of India. As elsewhere, here too there are hills and rivers; tha Sea washes out its coasts; there are Hindus and Muslims. Oriya undoubtedly is the dominant regional language. in this land of Lord Jagannath, very like India. we find an amalgam of all religions and languages. As in Utkal, if we can regard a part as the replica of the country taken as a whole, we can surely bring about an emotional and a national integration which is the vital need of the hour.

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MAJOR CONCESSIONS TO ORISSA JOURNALISTS

At the instance of the Chief Minister, Shri Janaki Ballav Patnaik, the Government of Orissa have decided to extend three major concessions to the accredited journalists/newspapers of the state.

The concessions will include, firstly, fifty per cent concessions to the accredited journalists towards bus fare while travelling in the buses of the State Transport Undertakings. Secondly, accredited correspondents have been allowed concessional tariff for their stay in the Orissa Bhavan at Delhi and the Utkal Bhavan at Calcutta, the tariff being at par with that applicable to officers of public undertakings. Thirdly, Government advertisements will be issued to the newspapers in the pattern followed by the Directorate of Advertisement and Visual Publicity (DAVP) of the Government of India on the basis of a minimum period of four month's continuous publication of a newspaper.

Growth of Orissa University of Agriculture & Technology

Dr. BAIDYANATH MISHRA

> *"A sacred burden is the life you bear. Look on it, left it, bear it solemnly, Walk beneath it steadfastly, Fall not for sorrow, falter not for sin, But onwards, upwards, till the good you win."*
>
> —**Kemble**

The Genesis

The report of the University Education Commission, 1950, under the Chairmanship of late Dr. S. Radhakrishnan deprecated the existing system of education and advocated a new approach. The Indo-American Team Report, 1955, under the Chairmanship of Shri K. R. Damble suggested a system of education as followed in the Land Grant Colleges of the U. S. A. for India. The Planning Commission report on the existing set-up of research, education and extension in Agriculture, Animal Husbandry and other allied fields underlined the inadequacy of trained personnel for increasing the output in the fields. The two existing Colleges of the State affiliated to the Utkal University and Government-owned, both located at the State Capital, the Utkal Krishi Mahavidyalaya (1954) (College of Agriculture) and the Orissa College of Veterinary Science & Animal Husbandry (1955) formed the nuclei colleges of the Orissa University of Agriculture & Technology by an Act of the State Legislature enacted as Orissa Act 20 of 1961. According to the terms of contract made by the Government of India with the United States of America, one American University, in respect of this State, the University of Missouri, Collaborated and assisted in—

(1) developing Teaching, Research and Extension;

(2) training personnel of this University in modern methods of Agricultural Science and practices and

(3) supplying some of the necessary apparatus and equipment required by this University.

The American experts were withdrawn in July, 1972.

Growth till 1966

The University started functioning from the academic year 1962-63, inaugurated on August 24, 1962 by Prof. Galbraith, the then Ambassador of the U. S. A. to India. Subsequently the College of Basic Sciences and Humanities was established in the year 1964 to serve as a constituent feeder institution to the two colleges of

Agriculture and Animal Husbandry and Veterinary Sciences. The College of Agricultural Engineering was established in the year 1966 as a constituent college.

The Great-leap of 1981-82

The University continued as a uni-campus institution with these four constituent colleges till the current academic year. In the current year thanks to the magnanimity of the State Government under the dynamic leadership of our Chief Minister with the active support of the Minister of Agriculture & Co-operation who is also the pro-Chancellor of the University, the University has become not only a multi-campus institution with the addition of three more constituent colleges namely, (1) the 2nd College of Agriculture at Chiplima (Sambalpur-Hirakud ayacut area), (2) the College of Home Science at Bhubaneswar and (3) the College of Fisheries at Gopalpur-on-sea, but it has got in its fold the Civil and Mechanical Engineering degree courses with the infrastructure available in the College of Agricultural Engineering & Technology.

Turn-out of the University

In the 16 convocations, so far, the University has awarded degrees to 2,216 agricultural graduates, 948 Veterinary graduates and 269 Agricultural engineering and technology graduates, post-graduate degrees to 764 in ten disciplines of Agricultural Sciences, 80 in six disciplines of Veterinary and Animal Husbandry Science. The University has awarded the Ph. D degree to 28 scholars, 25 in Agriculture and 3 in Veterinary and Animal Husbandry Sciences.

In the 17th Convocation, due to held for the year 1980, 116, 47 and 26 under-graduate students in Agriculture and Veterinary and Animal Husbandry and Agril. Engineering & Technology respectively 51 and 9 post-graduates in Agriculture and Veterinary Science & Animal Husbandry and 6 scholars in Agriculture await to receive their degrees, post-graduate degrees and Ph. D. degrees respectively.

Here again, this year, the university has taken geat strides thanks to the recommendations of the Visiting Team of the Indian Council of Agricultural Research and the sympathetic response of the State Government, in all the Faculties of Agriculture, Veterinary & Animal Husbandry and Agricultural Engineering & Technology.

In Agriculture, the under-graduate department of Statistics is upgraded into a post-graduate department bringing the total number of Post-graduate departments to eleven and a new under-guaduate department of Seed Technology is also started. Against the Team's recommendation to start an under-graduate department of Farm Forestry, the proposal which is under the active consideration of Government and accepted in principle, is to start a college of Farm Forestry and Horticulture with the available infrastructure at the High Altitude Research Station at Semiliguda.

In Animal Husbandry and Veterinary Science also three more Post-graduate departments are added to the six existing departments, the new ones being Gynaecology, Parasitology and Bacterilogy & Virology departments while the under-graduate department of Animal Physiology, Biochemistry and Pharmacology is being bifurcated into two separate departments of Physiology and Biochemistry and Pharmacology.

In both the Faculties of Agriculture and Animal Husbandry and Veterinary Sciences the existing P.-G. departments are being stregnthened to provide facilities for Ph. D courses in as many departments as possible and the I. C. A. R. as per their Team's recommendation are being requested to send Accreditation Teams for recognition of these departments for the purpose.

In the College of Agricultural Engineering & Technology which has so long remained without well-designated departments and a Board of Faculty, five under-graduate departments as identified by the Visiting Team of the I. C. A. R. are formed, namely,

(1) Farm Machinery & Power, (2) Soil & Water Management, (3) Agricultural Processing and Food Engineering, (4) Agricultural Structure, Civil Engineering and Environmental Engineering and (5) Mechnaical and Electrical Engineering. Besides, the Faculty will have two Post-graduate departments in (1) Farm Machinery & Power and (2) Soil and Water Conservation Engineering. The College of Agricultural Engineering started in 1966, thus will be a full-fledged Faculty, with P. G. courses, from the current academic session, achieving a major break-through in its development, after 15 years.

Besides, as has already been earlier indicated, the University is poised to have all the engineering degree courses also, as in Pantnagar and Haryana Agricultural Universities, with the starting of Mechanical and Civil Engineering degree courses this year and the Electrical and Metallurgical Engineering degree courses next year.

The College of Basic Science & Humanities started in 1964, also has had its share of long-awaited advancement with the starting of the Honours courses in Mathematics, Physics, Chemistry, Botany and Zoology in two combinations of Mathematics, Physics, Chemistry and Chemistry, Botany, Zoology, to provide better facilities for studeis in these basic sciences and to give job-satisfaction to the teaching staff of this College.

Research

The University started with the Researc stations at Bhubaneswar, Berhampur and Jeypore generously transferred to it by the State Government. To these are added later, the Jute Research Station at Kendrapara, the Research Stations at Semiluguda and Pottangi (Koraput), Keonjhar and Chiplima (Sambalpur) and the two Seed Farms at Patha (Cuttack) and Gambharipalli (Sambalpur). The 4 Research Stations at Bhubaneswar, Keonjhar, Semiliguda and Chiplima are developed as Regional Research Stations representing four district agro-climate regions of the State while the other Research Stations are also developed for basic and applied research. Besides, 13 research farms one in each district of the State, serve for adaptive research with close collaboration between the State Department of Agriculture and the University.

Agriculture

1·1. The objects of the Orissa University of Agricultrure & Technology among others as per provisions of the O. U. A· T. Act shall be "to make provisions for the oducation mainly of the rural people re the State of Orissa in Agriculture and promote reserarch and extension programmes in Agriculture and agricultural production., Research activititw are classfied into three (i) basic research, (ii) applied research and (iii) adaptive research. There are a number of All India Co-ordinated Research schemes sponsored by the Indian Couneil of Agrioultural Research, *ad hoc* schemes, schemes supported by the Board of Scientific & Industrial Research (Orissa), Government of India and State Government. In adition, the Orissa Agricultural Development Project started functioning from the year 1978.

1·2. Inspite of several constraints of men and resources, a number of good research results have been achieved. The following varieties of different crops have been released which have gained popularity among the farmers.

Crop	Varieties released
Rice	Hema, Kumar, Rajeswari, Parijat, Suphala, Jajati, Keshari, Subhadra, IR-36.
Green gram (Mung).	Dhauli
Black gram (Biri).	Sarala
Sesamum (Rasi)	Kalika and Kanak
Groundnut	Kisan
Ragi	Dibyasingha
Jute	Baladev

Crop	Verieties released
Wheat ..	O. W. 6—a selection from the cross N. P. 798/ Kalyansona and OW—835 a cross of HD 1941/ GPAN 480 are at the final stage of release. OW—6 is superior to Kalyansona in yield potential and tolerance to blight. OW—835 is shorter than Sonalika in height and matures in about 90 days with high field resistance to blight and high yeild stability.

1·3. Methods of reclamation of acid soils by using amendments like lime sludge from paper mills has gained popularity. Around 72,000 tons of lime sludge is available annually from the three paper mills of the State, practically free of cost. The methods of efficient and economic utilisation of indigenous rock phosphate of our country have been worked out for individual crops and cropping systems. A combination of rock phosphate and superphosphate depending upon the soil reaction and crop sequence has been found to be economical. An important area of study under the discipline of soil physics has been the determination of the fate of nutrient ions, especially the biodegradable nitrogen solutes during their movement in the soil medium.

1·4. In the discipline of Agronomy, several cropping patterns have been identified for maximum profit suitable for the different Agro-climatic zones of the State. Package of practices for weed control through weed cides have been worked out for different crops.

1·5. In the field of biological control of insect pests, notable progress has been made in controlling the coconut caterpilar. Easy and efficient labouratory techniques for mass culturing these parasites on alternate hosts have been developed.

1·6. The technique of production of paddy-straw mushroom has been standardised by the discipline of Mycology and Plant Pathology facilitating wide adoption of its cultivation throughout the State. Inexpensive methods of controlling diseases of various crops have been found out for each adoption by farmers.

1·7. The discipline of Horticulture has been successful in identifying micronutrients like Boron and Molybdenum for successful cultivation of vegetables. A number of studies have been conducted to findout the effect of growth regulators on the yield and quality of fruits and vegetables. Research work on pepper, cardamum, turmeric and ginger have been pioneering towards identification of suitable varieties of techniques of their economic production.

1·8. The Department of Plant Physiology has done good work on stress physiology and has identified some cultivators for drought resistance and saline resistance.

Veterinary Science

2·1. Blood transfusion is being practised extensively at the door of the farmers as life-saving measure for high yielding cross bred cattle. A proposal is under way for opening a 'Blood Bank' for cattle.

2·2. For the first time in Orissa, chlamydial agents and IBR virus have been isolated from aborted materials.

2·3. Parental antibiotic proved better for mastitis treatments.

2·4. Under the scheme, "Poultry for Meat" the average body weight of each broiler has been recorded to be 1,100 grams on the 8th week of age and is comparatively the best among other centres in the country. Out of the 5 strains, performance of IC—2 and IC—3 strains are better, the feed efficiency being 2·52 and 2·54, respectively.

2·5. Research work showed that the fat determination test in milk can be conducted at a lesser cost by using esser amount of sulphuric acid with reduced specific gravity.

2·6. Nutritive value of paddy straw could be improved by spraying water suspensions of urea and mollasses.

2·7. Horse gram has proved to be a better proteinous feed than Bengal gram. Tamarind seed can be used in the poultry ration upto 5 per cent level. Banyan tree leaves can be fed to goats for maintenance purpose. Its chemical composition and nutritive value have been determined.

2·8. Middle patellar ligament in stringhalt cattle could be repaired by transplantation of fascia lata and by anastomotic sutures.

2·9. Chromosome studies in sheep and buffalo have revealed many interesting points with regard to autosomes. Tissue mentabolism study in modified warburg technique showed incrased O_2 intake when the tissue was kept in air instead of oxygen.

2·10. Deoiled sal seed meal having tanning content of 4 to 5 per cent can be added to the conventional ration mixture at 30 per cent level without affecting the milk yield in cows producing 1,500 litres of milk in 300 days of lactation.

2·11. Crushed water hyacinth supplemented with mineral mixture, salt and vitamins can be fed to the piglets to attain 40 Kg. live weight without feeding any concentraties.

2·12. Calves (male) suffering from urinary obstruction could be successfully tackled.

Extension Education

The main object of the University is to bring the results of science to the homes of the cultivators-transfer of technology evolved in laboratories to the land of the cultivators, the vast majority of the samall and marginal farmers of the State. It is the scientific temper, in the words of our late Prime Minister, Pandit Jawaharlal Nehru which these Agricultural Universities foster in order they may be an effective link between the scientists and farmers.

The Extension Education Division of the University provides an opportunity for teachers and students to gain field experience and get themselves acquainted with field problems and methods of tackling them and to provide necessary feedback to the research workers. It also provides training to the extenstion personnel and farmers in the State.

The following programmes are in opration:

1. Unniversity Extension Block Programme in 6 blocks of Cuttack (3) and Puri (3).
2. Information and Communication
3. National Demonstration Programme in two districts of Keonjhar and Mayurbhanj.
4. Agricultural Production Programme in Dhenkanal district.
5. Operational Research Programme (8 villages of Pipli/Delang blocks of Puri district).

The basic objective of the Extension Education is to tryout the results of research in the farmers fields and bring out models for extension to be made for larger application by the extension agencies of the Department and to this effect it is proper to take up new areas in the State with full State Government support to the University.

Potato Seed Production

Prior to 1963, the department of Agriculture, Orissa used to import about 20,000 mounds of potato seeds every year from other states. Sometimes due to non-availability of quality seeds in time, the farmers used to face difficulties in growng potato. In 1962 an attempt was made to grow seed potato in the farmers field in two villages, namely Nakhauri and Sisupalgarh at the cost of farmers. The seeds were preserved in the cold storage at Cuttack for use as seeds in the next season. This became a success and encouraged the Government authorities to start "Seed Potato Production Scheme" for the State of Orissa. While in 1962 only 19 mounds of seed potato were preserved, today more than 64,000 quintals of potato seeds are produced every year.

A New Way of Interculture in Upland Paddy.

Weed infestation was a major problem in high-land paddy in the villages around Bhubaneswar. Farmers used to practise hand-weeding which cost more. During adverse climatic conditions, the farmers preferred to leave the hope of crops as it was not possible to remove the weeds by hand-weeding. In 1961, a trial was conducted in the field of Sri Bhaskar Rot, an young farmer of village Nakhauri by sowing the seed in lines behind the plough and inter-culture with 'desi Kodi' (a locally designed hand-weeder). The Kodi' proved to be very useful in controlling weeds and worked efficiently. This simple method of inversion of soil by 'Kodi' in between lines of paddy not only controls weeds, but induces more tillers and conserves moisture. The cost of weeding by this method was reduced to 17 per cent. Farmers on an average are getting 12 quintals of paddy following this method instead of 8·4 quintals which they were getting by following their own way.

Under the Extension Education Programme, new schemes of Training Farmers and Extension Workers, Livestock Extension Programme and Extension Programme for the farmers of Jagatsinghpur Agricultural district, Begunia and Bolgarh blocks are being proposed.

Teachers Training

Under the U. S. A. I. D. Training Programme, 84 teachers were trained in the past in the branches of Agriculture and Animal Husbandry. Presently, the training is taken up under the Faculty Upgradation scheme of the I. C. A. R.

The College of Agricultural Engineering and Technology has introduced the following improved agricultural implements.

1. *M: B: Plough*
2. *Cultivator witjh Seeding Attachment*
3. *Winnower*
4. *Groundnut Decorticator and*
5. *Power Paddy Thresher*

The above implements have been designed under the Farm Implements Design Unit of the World Bank Scheme. These implements have been tested in the Government Implements Factory and in cultivators' fields and are gaining popularity.

Student Welfare Activities

There is a section operating in this University for the welfare of the students. The University students have acquitted themselves creditably in N. S. S. activities and particular mention may be made of the good work of to the N. S. S. campus organised by the University in assisting the flood victims and also the work undertaken near the Peace Pagoda at Dhauli.

Library Facilities

The University Library is kept open for 12 hours a day from 10 A. M. to 10 P. M. on all working days. The library has open access system and possesses adequate reading rooms. The library is well-accommodated with all possible amenities. It has a reprography section which provides photo-copying facilities to the readers. The library has 205,723 volumes of books on various subjects, particularly in Agriculture, Veterinary, Engineering and General Science. 370 magazines are subscribed for use of the research workers, staff and students. An offset printing machine has been added to the library. The text book bank provides useful service to the students.

Provision for hostel accommodation

Work will soon be taken up for construction of two new hostels for the students and one farmers' hostel with a total ICAR provision of Rs.36 lakhs and hostel accommodation will thus be augmented. Besides, the Agriculture Department has graciously handed over z portion of their building for hostel purpose which is being utilised to accommodate 60 students in view of the need of more hostel accommodation.

Staff Quarters

A major break-through in construction of stiff quarters is also achieved by the decision to utilise the I. C. A. R. allotment of Rs.15·0 lakhs. The University is trying to obtain twice the amount i. e. Rs.30·0 lakhs from the Housing and Urban Development Corporation and construct more than 100 new staff quarters through the Orissa State Housing Board.

(*See Page 31*)

Agricultural Development in Orissa

Dr. N. R. PANIGRAHI

General

Orissa State is located on the coast of Bay of Bengal and lies between 17°-31′ and 22°-32′ North latitude and 80°-27′ and 87°-29′ last longitude. The total geographical area of the State is 15·54 Million Hectares with a population of 26 Million. Cultivated area in the State is to the extent of 6·6 Million hectares (42·5 Per cent of the area). Forest covers 6·64 million hectares (42·7 per cent of the area) and the remaining 2·30 million hectares account for the other categories of land use pattern.

The annual flow of water in the rivers of Orissa is more than 14·5 million hectares Metres which is roughly one-tenth of the run-off of the entire river system in the country Only a small fraction of this water is being utilised and of the net sown area about 1·2 million hectares is being irrigated at present during Khariff a large portion of which is protective Rabi irrigation is available for 0·49 million hectares only. Area sown more than once cove 2·6 million hectares.

Agriculture and allied activities account for about 60 per cent of State's income at current prices, while the corresponding figure for all India is less than 50 per cent. The pressure of population and poverty in Rural Orissa are considerable. The Scheduled Triben and Castes (23 per cent and 15 per cent respectively) are economically the weakest sectiod in the community. Overlapping with the Scheduled Castes and Tribes are the " small " ant "Marginal" farmers with holdings less than 2 hectares who represent roughly 2·7 million out of a total of 3·6 million farm holdings. Although these farmers operate over 75 per cent of all operational holdings, they control less than 40 per cent of total cultivable land while farmers having 5 hectares or more account for about 32 per cent of the land. Adding to this skewed distribution of income in rural areas are the landless and agricultural labourers who constitute an additional 1·8 million households.

Soils

The soils of Orissa can be grouped into Residual and Transported soils. The residual soils of the uplands are predominantly Red and Yellow laterites which are typically highly leached, acidic and low inorganic matter and Nitrogen with high phosphorous fixation. The productivity of such soils is therefore, limited both by fertility and water holding capacity. It is estimated that 86 per cent of the land area in the State is coming under this group particularly in the inland districts.

The transported alluvial soils found in the low lands are moderately fertile, slightly acidic deep and more productive than the residuals. The intensity and duration of inundation, determine the productivity of alluvial soils in the coastal zones. Along the coast, problems of salinity, leaching and drainage limit the productivity even though the soils are fertile.

By and large the size of holdings are small in the coastal belt where the fertility status is higher and the large size holdings are predominant in the inland districts where the soils are poor. Such a distribution of land holdings has been a serious challenge to Agricultural Technology attempting to increase productivity through better management.

Climate

The mean annual rainfall is 14·82mm. falling in 73 days. 60 per cent of annual precipitation is received between July to September leaving the rest of the year practically dry. High rainfall intensities typical during the monsoon, lead to much run-off and flooding of low lands, cloudy weather for about 100 days during the main crop season (khariff) followed by cool temperature from November has been a serions limitting factor in improving productivity of Rice which is the main Khariff crop. High annual rainfall and drought are no doubt, paradoxical but they coexist in the State. Floods, droughts and cyclones occur almost in every 3—5 years in a severe form causing substantial loss in production. The fluctuation in food-grains production due to such natural calamities may well be appreciated from the following table:—

Normal Years		Abnormal Years		
Year (1)	Production of food-grains in lakh tonnes (2)	Year (3)		Production of food-grains in lakhs tonnes (4)
1963-64	49·24	1965-66	Severe drought	36·85
		1966-67	Drought	42·30
		1967-68	Flood and Cyclone	41·35
		1968-69	Mild flood	47·21
		1969-70	Mild flood	47·28
		1970-71	Mild flood	48·63
		1971-72	Severe Cyclone and flood	43·54
		1972-73	Drought and flood	48·60
1973-74	52·74	1974-75	Severe drought and flood	39·71
1975-76	55·70	1976-77	Severe drought	40·75
1977-78	55·61	..	..	..
1978-79	57·65	1979-80	Severe drought	58·72
1980-81	59·77	..	..	..

Factors influencing Agricultural Development

The preceding paragraphs throw up the following problem for allround improvement in Rural economy strongly based on Agricultural Development.

1. Developing a strategy to minimise the risks due to droughts, floods and cyclones.
2. Increasing intensity of cropping both under irrigated and non-irrigated conditions.
3. Improving productivity of Rice which is the main crop
4. Developing commercial crops to improve the economy
5. Increasing the Irrigation facilities
6. Improving the soil.

Strategy for the sixth plan

To overcome the chellenging problems the State Government has drawn up the strategy for increasing agricultural production in the State during the Sixth-Plan period basing on the following measures:—

(*a*) Stepping up coverage under H. Y. varieties of paddy and other crops

(*b*) Soil improvement through application of Soil ammendments and step up the use of organic manures and chemical fertilisers.

(*c*) Diversifying the cropping patterns on unbunded high lands from Rice to other less water consuming and drought tolerant crops and varieties.

(*d*) Propagating varieties of Rice which complete grain formation before moisture stress is developed and propagating dry farming practices like deep tillage, strip cropping, mixed cropping, weed control by all the year round tillage, moisture conservation through row cropping accross the contour, early planting and maintenance of optimum plant population, etc.

(*e*) Increasing irrigation potential through Major, Medium and Minor and Lift Irrigation Projects as well as Dug-wells.

(*f*) Increasing the area under Multiple cropping through controlled irrigation by providing field channels and field drains in the major commands and simultaneously by ensure efficient use of water and larger coverage in the irrigated areas. State Government has decided to take the water course up to 5 hectare blocks as part of the irrigation project.

(*g*) Step up production of commercial crops like Jute, Oilseeds, Sugarcane and Cotton.

(*h*) Strengthen the distribution system of input supplies including credit

(*i*) Consolidation of holdings to over come the evil effects of fragmentation and create conditions for better land management.

(*j*) Providing strong support to transfer of technology from Scientists to farmers with firm linkage between Research and Extension supported by systematic training of Field staff and farmers through Revised Extension System envisaged under Orissa Agricultural Development Project.

Consistent with the strategy planned for Sixth Plan the following higher production targets under important programmes have been aimed at keeping in view the base level production in 1978-79:

		1978-79	1980—85
Food Grains	..	57·65	74·56 Lakh Tonnes
Oil seeds	..	4·27	11·20 Lakh Tonnes
Jute and Mesta	..	6·43	9·70 Lakh Bales
Sugarcane	...	28·10	51·10 Lakh Tonnes
Cotton	..	0·07	0·80 Lakh Bales

Progress made so far during Sixth Plan

Rice—Though the productivity of Rice remained stagnant as per the estimates of Bureau of Statistics and Economics, Orissa a bold venture was taken up during 1980-81 Summer to raise the productivity of Rice from about 2 tonnes per hectare (in terms of paddy) to 3·5 tonnes per hectare (in terms of paddy) by bringing together all the agencies concerned to provide the relevant technology and input support to the farmer. In the process the average yield obtained from 9,909 hectares was 4·42 tonnes per hectare (in terms of paddy). The following table is a brief summary of the results obtained.

Sl. No.	District		Total area in Hectares	Total Crop cutting experiments	Maximum Yield Tonnes/ Hectares	Number of Crop Cuts above 3·5 Tonnes	Average Yield in Tonnes/ Hectares in progra-mmed areas (1981 summer)	Average Yield in the District (1980 summer)
(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)
1	Cuttack	..	2,725	306	6·68	292	4·41	1·82
2	Puri	..	1,396	397	8·27	351	4·65	1·63
3	Balasore	..	610	116	8·00	51	3·53	1·98
4	Sambalpur	..	4,178	129	8·02	115	4·60	2·14
5	Balangir	..	1,000	27	8·06	27	5·01	2·18
	Total	..	9,909	975	..	836	4·42	1·95

The above experiment has been enlarged to about 2 lakh hectares during Khariff 1981-82 including non-paddy crops. The expereince gained so far has reiterated the confidence of the State Government that the target under food grains for Sixth Plan will be achieved.

Pulses—Pulses are included under over all food grains production programme but are given special emphasis to meet the domestic needs of the State and contribute for increase in the Protein content of the daily diet of the common man. There is steady increase in the area under Pulses though productivity has not risen significantly as 80 per cent of the Pulses area is grown under available moisture conditions during Rabi. The area under pulses during last three years is as follows :—

Year		Area in Hect.	Production in Tonnes	Yield/Hect. in Quintals
1977-78	..	13,70,222	6,78,839	4·95
1978-79	..	15,66,099	7,91,234	5·05
1979-80 (Severe drought)	..	16,51,523	5,66,882	3·40
1980-81	..	17,25,000	8,86,000	5·10

Commercial Crops

Oilseeds—Scarcity of edible oils is recognised all over India and in line with the National Policy, the State Government has attached great importance to increase production of oilseeds. Among the oilseeds, Groundnut and Mustard are considered important in the State. Supply of improved seeds, Phosphatic Fertilisers and Plant Protection Chemicals at subsidised rates are provided to improve productivity. Identification of areas both under Rainfed and Irrigated conditions to expand the area under the above crops by developing appropriate crop patterns has been the main strategy with strong input supply support. The progress under oilseeds development during last three years is as follows:

Year	Groundnut		Mustard		Total Oilseeds	
	Area in hectares	Production in tonnes	Area in hectares	Production in tonnes	Area in hectares	Production in tonnes
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1977-78	1,19,055	1,44,721	1,09,661	48.364	5,43,579	3,28,009
1978-79	1,43,877	1,91,755	1,52,033	68,419	6.64,133	4,26,950
1979-80 (Drought year)	1,74,572	1,22,644	1,44,586	39 265	7 21,357	2,78,911
1980-81	1,72,405	2.31,017	1,62,117	72,356	7,36,445	4,84,771

Sugarcane—There are three Sugar Factories in the State and two more are proposed to be established during Sixth-Plan period. The State Government appropriately emphasises the need for stepping up production of sugarcane during Sixth-Plan period to support the factories. The programme is supported by supply of planting material at subsidised rates (transport, subsidy) and training of farmers.

The progress made during last three years is as follows:

Year		Area in Hactares	Production in Tonnes (Gur).
1977-78	..	43,000	2,60,000
1978-79	..	46,000	2,81,000
1979-80	..	46.500	2,82,000
1980-81	..	48,600	3,06,000

Cotton—Cotton Development is of recent origin. The first few years were devoted to educate farmers and develop suitable technology for rainfed cotton and irrigated cotton.

Varieties were identified for different situations. Programme has now been drawn up to take up seed multiplication. There are 5 spinning Mills in the State and 9 more are proposed to be established during Sixth Plan. Development of cotton which now stands at 4,005 hectares with a production of 4,005 bales, it is proposed to be step up production of cotton to 80,000 bales by end of Sixth Plan. Marketing support is provided through Spinning Mills.

Potato and Vegetable Development

Potato is grown over 8,082 hectares and vegetables over 5,74,956 hectares in the State. 21 Cold Storages have been set up in the State both under Government Sector and Co-operative Sector. Breeders seed is obtained and foundation seed is multiplied in the State to provide good quality Potato seeds to farmers. The Cold Storages are utilised to store certified and foundation seeds. Vegetable cultivation around urban areas and in Kitchen Gardens has been taken up to meet the increasing demands for vegetables.

Input Supplies

Seeds—Orissa State Seed Corporation has been set up in 1978 to take up multiplication of certified and foundation seeds. The corporation will in course of time take over entire seed production, procurement and distribution programme and thus relieve the Extension Agency from this responsibility. The Consumption of certified and improved seeds during last three years is as follows:

Year		Quantity of seeds distributed (Tonnes)
1977-78	..	4,397
1978-79	..	5,926
1979-80	..	5,446
1980-81	..	14,445

The target is to supply about 1,70,000 quintals of seeds by end of the Sixth Plan to cover atleast 7 per cent of the area under different crops with improved and certified seeds.

Fertilisers—Fertilisers are distributed through Co-operatives, Agro-Industries Corporation and Private Dealers. The major requirement for improving consumption of fertilisers was found to be the expansion of retail sale points. State Government has taken steps to increase the sale points under Co-operative sector and private dealers are also being persuaded to expand their distribution net work. The Block Headquarters have been declared as Rail heads for purposes of fertiliser supply and thus the supply of fertilisers at uniform rates all over the State. State Government have also under consideration to subsidise the transport cost of fertilisers from Block Headquarters to interior areas so that farmers in interior areas are not required to pay more than their counter-parts in other areas. Some of the Manufacturer distributors have adopted one district each to promote fertilisers use. All these steps are expected to push up fertiliser use substantially. The level of consumption of fertilisers during last three years is as follows :—

		Consumption of Nutrients in Tonnes			
(1)		N (2)	P (3)	K (4)	Total (5)
1977-78	..	45,784	12,034	6,858	64,676
1978-79	..	49,879	13,799	8,113	71,791
1979-80	..	46,867	13,267	7,242	67,376
1980-81	..	51,682	15,860	8,321	76,363

Pesticides—Pesticides are supplied through Co-operatives and private dealers. But emphasis is on Integrated Pest Control backed up by regular Pest Surveillance. Control through indescriminate spraying with chemicals has not been found to be conducive for good management, cultural practices and Biological control combined with judicious use of chemicals is being advocated to minimise losses due to pests and diseases. A strong pest-surveillance organisation to forecast pest incidence is being organised to minimise the expenditure on Pesticides. But control of pests in time through prophylactic measures and epidemic control to save losses in yields has been the approach all through. The basic control is exercised through seed treatment and seedling treatment. The area covered by plant protection measures during last three years is as follows :

1977-78	..	15·0 (Area covered in Hectares)
1978-79	..	15·5
1979-80	..	16·5
1980-81	..	14·7

Extension Organisation, Research and Training

With the Assistance of World Bank, Orissa Agricultural Development Project was launched in July 1977. Under this Project a single line command has been introduced with strong linkage with Research Scientists and backed up by systematic training of officers at all levels and farmers. Flow of relevant technology from Scientists to farmers at appropriate time has been ensured under this Project. The quality of Extension Officers has been improved through systematic training. Farmers are assured of correct advise at appropriate time. The reorganised extension services are gaining ground. Farmers are now aware of the role of the Village Agricultural Worker and have become conscious of this visits. The Scientists and Extension Officers engagad themselves deligently to the field problems and are increasingly becoming confident of their technology tested by compact area programmes. The impact of the Reorganised Extension Services is reflected in the increasing coverage under High yielding Varieties pulses and Oilseeds ect. The impact on overall producitivity of principal crops will soon be visible.

To conclude the Agricultural Development in the State has been the main concern of the present Government and it has been taken up on right lines. It is confidently expected that the targets fixed for Sixth Plan will be achieved.

Director of Agricultural and Food Production

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Director of Agriculture and Food Production

CHIEF MINISTER J. B. PATNAIK'S LOVE FOR SANSKRIT LANGUAGE LAUDED

A Resolution passed in the World Sanskrit Conference, Varanasi States :

"In Orissa 'Shri Jagannath Sanskrit University' has been established and started recently to protect, extend and propogate the Sanskrit Language, which is the Veritable Treasure-house of multi-dimensional literature, of the social and natural sciences as well as of religious and philosophical wisdom. The emergence of this University is a living symbol of Honourable Chief Minister of Orissa Shri Janaki Ballav Patnaik's love and respect for Sanskrit language. Therefore, he deserves thanks. This Fifth World Conference expresses its cordial thanks to the Honourable Chief Minister, Shri Janaki Ballav Patnaik".

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Crop Insurance Scheme in Orissa

SHRI S. C. RAKSHIT

Agriculture forms the dominant sector of Orissa's economy. Nearly 75 per cent of the State's working population depends upon agriculture as its main source of livelihood. But rainfall in the State is often very erratic resulting in frequent floods and droughts which lead to crop failure. Besides, pest infestation is also a regular feature in the State causing serious damage to different crops. In order to safeguard the interest of the cultivators from this uncertain but recurrent risk of crop loss, the Crop Insurance Scheme has been introduced in the State from the 1st July 1981. The other States like West Bengal, Tamilinadu and Gujurat have already gathered experience in the line and the scheme has evoked wide spread interest among farmer beneficiaries who have actively participated in the scheme. So all in fitness of things Orissa has taken up the scheme on a pilot basis from the last kharif season with its main food crop, paddy.

The Scheme is being implemented in collaboration of the General Insurance Corporation, Bombay and the State Government is a co insurer. The risks covered under the scheme are natural calamities like flood, drought, frost, and cyclone; pest infestation, plant diseases apart from riot and strikes. The Registrar, Cooperative Societies on behalf of the State Government has been appointed as the Principal Officer to operate the scheme which is being implemented through the District Central Co-operative Banks. The Secretary of the concerned Central Co-operative Bank is responsible for operating the scheme at the district level. The finance in the shape of crop loan for raising the crop is provided to cultivators by the District Central Co-operative Banks through their respective Services Cooperative Societies.

At present, the farmer, who avails of crop loan from Services Co-operative Societies, is only entitled to be covered under this programme.

Further, as the Crop Insurance in respect of individual farmer is quite impracticable from the economic and administrative point of view the same has been taken up on group basis in which a Community Development Block has been taken as a Unit. This unit has been decided upon by taking into account its homogenity of area which is in turn determined by factors like agro-climatic features, variety of seeds used by the farmers and occurrence of natural calamities in the area. Under this scheme, a single crop is to be insured for a particular season only.

A loanee, who wants to get this crop loan insured, will have to pay the premium at a rate fixed for that area, for that crop and for the season in which it is grown. This premium is calculated on the basis of yield rate of that crop grown during that season during the previous years. In case of small and marginal farmers 50 per cent of the premium is borne by the cultivator and the rest 50 per cent is borne by the State Government and Central Government in 50 : 50 basis.

The area where the programme is operating, the premium as well as non-indemnifiable limit have been fixed by the General Insurance Corporation and the yield guarantee by them for a particular area is determined on the basis of average yield of that crop during the past few years deducting the non-indemnifiable limit fixed for that area. The non-indemnifiable limit of an area is calculated on the variation of yield rates of that crop during the previous 10 years. The quantum of indemnity amount payable to the farmers will not cover the entire loss but will be in proportion to the shortfall in the yield below the guaranteed yield. The yield of the crop is determined through the crop cutting experiments conducted by the State Bureau of Statistics and Economics. The claims, if any as decided after crop cutting experiments, are to be discharged by the General Insurance Corporation to the District Central Co-operatve Banks and not to individual farmers and the Banks are responsible to adjust the claims of the participating farmers. Premium as well as the rate of indemnity for a given crop will be uniform for all insured farmers within the Block irrespective of their actual production.

At the initial stage as stated above, the scheme has been taken up with the major food crop of the State, i.e., paddy. With a view to cover greater number of farmers under the programme the maximum sum insured per farmer has been fixed at Rs. 2000- at present with a total amount of Rs. 5·00 lakhs on a pilot basis. The programme was launched during the last (1981-82) Kharif season in 15 Blocks of 10 districts out of 13 districts of the State. The Blocks where the premium and non-indemnifiable limits have been fixed at 4·75% and 10% respectively have been taken up for Crop Insurance, so as to facilitate the farmers to pay minimum amount towards premium and to get more indemnity, if crop fails.

It is observed that the farmer beneficiaries are taking keen interest in the scheme and accordingly it has been decided that the scheme is to be operated in an extensive scale during the current rabi season for which the General Insurance Corporation, Bombay have allotted Rs. 45·00 lakhs so as to cover more number of Blocks under Insurance Programme in summer paddy.

The Crop Insurance Scheme as pointed out earlier is being implemented on a Single Crop though there is enough scope to extend the same to other food crops as well as Commercial Crops. Secondly, the scheme is operating in a limited area, and the farmers availing Crop Loans from the Central Co-operative Bank only whereas in other States, a number of Commercial Banks have already taken up the project. The scope is wider and farmers of different categories are availing the facilities provided under the scheme, and it is for consideration that the facilities now available to the loanee farmers of the Cooperative Banks are further extended to all other farmers and to cover other important food as well as commercial crops through the Commercial Banks. It is expected that the leading Commercial Banks of Orissa may pioneer the Project and assist the farming community for their better Prospect.

Agriculturist
A. & C. Department

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Soil and Water Conservation Planning in Orissa

SHRI R. SATAPATHY

Soil erosion is a major factor leading to poor and low per hectare output from the agriculture fields in the State. A review made by the Indian Council of Agricultural Research (ICAR) in early fifties reveals that Orissa had lowest per acre yield of rice which is the principal crop of the State. One of the chief causes attributed for the lowest per hectare crop output is mechanical erosion and low fertility status of the soil as a result of such erosion.

The physiography of the State accompanied with a long and hot-dry summer preceding monsoom downpour is the main natural reason responsible for acute erosion of not only crop land but also forests, pasture, hills and valleys. Nine out of thirteen districts of the State are hilly where erosion is a problem. The rest four coastal districts though in a depositional phase, have acute problem of wing erosion in the coastal finge. It has been estimated by interpretation of Satellite imageries that there are more than 30,000 hectares of duned land along the coast where wind erosion is an acute problem.

The Problem and its Extent

The problem of erosion and its impact on foodgrain production have been engaging the attention of the administration even in pre-plan periods. It is understood that at the direction of the then Food Commissioner of Orissa, it was estimated that more than 12,770 sq. miles equivalent to one-fifth of the total land surface of Orissa was under the grip of acute erosion due to shifting (Podu) cultivation. This improper land use not only results in poor uneconomic crop output and erosion of crop land on hill slopes but also leads to destruction of forests and siltation of rivers and streams and heavy sedimentation of the reservoirs of the irrigation projects down below in the plains.

Low and uncertainty in productivity due to erosion and failure of monsoons have been threatening the very back bone of the State economy in general and food problem in particular. In order to stabilise agricultural production and to obviate the vagaries of monsoons, quite substantial plan provision has been made in the past to increase the acreage under irrigation. But with all the plan resources at our disposal, not more than 17 per cent of the land under agriculture could be irrigated in the State. Thus, cast majority of the land, i.e., nearly 83 per cent of the cultivated area requires intensive soil and moisture conservation measures in order to mitigate the ill effects of drought and uncertainty of monsoons on which the whol agriculture strategy is dependant upon.

Moreovar, to prolong the life of resorvoirs of the multi-purpose river valley projects, soil conservation is the formost necessity. A study done recently has revealed that the life of Hirakud reservoir has come down to 77 years as against the original estimated life of 111 years, Intensive soil conservation measures in the catchment of Irrigation projects have thus become a necessity in order to save the reservoir from siltation. It is needless to emphasise that both agriculture and power are very much dependant on the life of these reservoirs.

The State has many more acute and extensive problems of erosion that limit agricultural production adversely. Uplands under, agriculture (locally known) as *Goda Padar, Dahi* etc., estimated to be ·2·93 lakh hectares) without bunds and terraces. Government waste lands (idle) (28·8 lakh hectares), acute erosion due to meandering nature of streams and rivers, both in deltaic region as well as in the erosional plains, are some of the typical problems of erosin which badly affects the agricultural lands in the State. Besides, amelioration of acid soils and reclamation of saline lands (4 lakh hectares) along the coastal region and estuaries need urgent attention for increasing production of these areas.

The neglect of soil and land resources in the past has led to the disappearance of many flourishing civilisation in the world. The extent and degree of erosion in the State as indicated above, is quite alarming. The problem of erosion has been on the increase due to destruction of the natural vegetative cover of the soil by over-felling and over-grazing.

There has been now much pressure on the agricultural land due to increase in population too. It has been estimated that *per capita* cultivable land available in Orissa has come down to 0·26 hectare from which an individual farmer in Orissa has not only to feed himself, but also to earn all other necessities of life like fuel, fodder, fibre, etc. The *per capita* agricultural land in Orissa as per the statistics of 1970-71 was of the order of 0·31 hectare which has now within a decade, decreased to 0·26 hectare due to increase in population. The population has increased but not the extent of land which is the greatest challenge to day necessitating scientific conservation practices in order to enable one to have multiple cropping instead of conventional farming of having a mono-crop of paddy depending on the monsoons, without utilising the benefits of residual moisture regime, as a result of approved conservation practices.

Watershed Strategy

It can be easily appreciated from the preceding paragraph that not only to boost up the productivity but to keep it on a sustained standard, soil and moisture conservation measures are basic necessities. The State made sober attempts from the very beginning of the plan period and took up a diversified land use programme based on land suitability in the priority watersheds of the States. Watershed is some what a recent terminology applied to the sphere of developmental activities focussing mainly on agricultural production. Not only agricultural activities but also other developmental programmes like irrigation, communication, roads, animal husbandry, forestry, pasture development, etc., have all now been advocated to be done on watershed basis.

Watershed is the unit of a drainage area, every part of which drains to a common point. That is, in a watershed the run-off from any part of the area is concentrated to a point, where it can be controlled, reserved or recycled for benefit of agriculture, power or other uses. The unit watershed has many multiples and sub-multiples. The catchment and sub-catchment are the multiples, whereas sub-watershed, mini-watershed, micro-watershed are some of the sub-multiples. When a drainage basin of a big primary river of several square miles is meant, it is termed as a catchment, but for the drainage area of a small revulet, the term watershed, mini or micro-watersheds is often applied depending on the drainage area and the position of the controlling stream in the hierarchy of the river system. All developmental activities including soil and water conservation measures have now been advocated to be taken up on an area saturation basis taking watershed as the unit area. Experience shows that this not only costs less but is technically more sound and aesthetically more beautiful. The planning of soil and water conservation in Orissa has been to identify priority watersheds not only in the river valley catchments of the Hirakud, Machkund or Rengali, but also to demarcate small watersheds in every IRD Block to take up developmental activities limiting it to a particular watershed.

Achievement

As has already been indicated that the State Soil Conservation Organisation has been working on a diversified land use programme based on the suitability of the land in the priority watersheds of the State as a whole, specially in the watersheds having more erosion lying in the catchment areas of the multipurpose river valley projecls. Under the programme sanctioned under various schemes, by and large, about a lakh hectatres of land which was hitherto been put to agricultural crops but was being cultivated without bunds or terraces, have been bunded. The lands which are put to bunding, have not only been saved from ravages of sheet and gully erosion, but also have been put to agricultural use every year. Much of the land in Orissa, specially the uplands, remain fallow and is cultivated once in 2-3 years. The predominent reason of such idle use of land is erosion and degraded fertility as a consequence of such erosion. After bunding these lands, it has been observed that increase in yield has gone up to a tune of 33—75% in case of crops like maize, soan, niger, etc. Bunding stops mechanical erosion, conserves more moisture, allows infiltration by which the moisture regime and the fertility status of not only the land in situ is increased, but also the valley land gets developed and a second crop is possible in the valley due to residual moisture.

The Directorate of Soil Consevation did not limit their work to bunding only, but initiated a rational land use programme on watershed basis right from the beginning of the First Plan period. Under the programme comprehensive land treatment beginning from the baid hill tops and steep hill slopes to the valley lands and even up to eroding stream lands were treated with comprehensive land defence measures. The programme gave better results when done in this way than done in a sporadic manner elsewhere.

The treatment of the land on hill slopes and hill tops by plantation of cashew, sisal, coffee, etc., indirectly helps the agricultural programme in the valley lands by intercepting the run off. The ecology of the valley land changes gradually by interception of run off and by promoting infiltration. The desiccating wind which was withering away the crops specially during short drought spells, does not occur. Due to interception of run off in higher slopes of the watershed and due to more infiltration there is better ground water recharge in the valley land.

In treating watersheds in a comprehensive manner the Organisation did not limit itself to the conventional agriculture practices. The State Soil Conservation Organisation took a bold step and introduced a diversified rational land use programme. They introduced in the early fifties perennial crops like cashew, sisal, sabai, coffee and even bamboo, paper and cardamum etc., to some extent. These crops do not require conventional agricultural practices and suited to land which is otherwise not very suitable for the usual field crops. It is gratifying to note here that success of introducing this diversified land use programme brought the soil and water conservation programme in the State to lime light and the State exchequer is earning a very substantial dividend from these plantation. So much so that about Rs. 70 lakhs have been collected from the cashew and sisal alone during 1979-80.

Other basic land treatments like amelioration of acid soils by liming have been attempted over 28,000 hectrares of farmers, land. It has been estimated that there has been a substantial increase in yield of crops specially in case of groundnut by liming and instead of hollew pods, solidnuts are produced after liming which becomes very conveniencing to a common farmer.

The State Soil Consetvation Organisation has also constructed more than 300 Nos.

of farm ponds and water harvesting structures, specially in hilly districts. These farm ponds are not conventional dug out ponds, but are created by daming small gullies. These farm ponds have been assets to the rural community and there is always a great demand for execution of such projects by the farming community.

The above is only a brief of our attempts for not only increasing the crop production, but also to keep the agricultural lands not to go out of cultivation. Diversion ditches, afforestation of hill slopes, gully control structures and such other measures for community benefit have been taken up on an intensive scale and has been of immense benefit to the agricultural community. It is now believed that there is conscious opinion on this and Government under Economic Rehabilitation of Rural Poor programme have decided to distribute some of the plantations (cashew raised by the Soil Consertion Organisation). There is now at least a belief that the monocrop paddy economy in Orissa is probably not a solution to bring up agriculture to a descent living in the State. As such the Government are formulating various landbesed schemes depending on perennial crops like cashew, sisal, coffee, bamboo and sabai, etc., which thrive in the uplands and do not depend on irrigation after their establishment.

Director of Soil Conservation,
Orissa, Bhubaneswar.

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REHABILITATION OF LEPERS

Orissa Governor Shri C. M. Poonacha emphasiged the need for making concerted efforts to eradicate leprosy and rehabilitation of leprosy patients. The Governor also pleaded for carrying out the health check of school students effectively and to mount a publicity drive to educate the people that leprosy was not a dreadful disease and it could be cured.

Addressing the Annual General Body Meeting of the Hind Kusht Nivaran Sangh, Orissa State Branch, in Raj Bhavan, Bhubaneswar on December, 2, the Governor suggested that greater attention should be paid to make the rehabilitation programme self-sustaining and self-reliant to reduce the burden on the society. The Governor said that the negative leprosy patients could earn their living through agriculture, dairy, poultry, small industries and trade. Units like weaving, shoe-making, rope-making, carpentry, black-smithy aad tailoring have been introduced in the leprosy Homes successfully. Efforts to activise these Units so as to earn a good income for the persons cured from leprosy, will go a long way in generating confidence among them that they are not a burden to the society.

Orissa State Co-operative Bank in service of weaker sections

SHRI N. BISWAL,

Introduction

Orissa is a State with majority of population depending on traditional agriculture and this is one of the major reason for which 80 per cent of the population are below the poverty line. Industry is not well developed in the State. 24 per cent of the cultivated land is irrigated and 70 per cent of the rain fall is available during June to October. Most of the agricultural land is mono-cropped due to the above factors, though the land is fertile and water rasources are adequate. Natural calamities like flood and drought are frequent as a result of which farmers are unable to depend upon agriculture as assured source of income.

Agricultural Credit Societies were established in Orissa at the dawn of the present century particularly at Banki in Cuttack District and at different places in Ganjam district. After Independence, the Orissa State Co-operativa Bank was organised with a view to provide assistance to the agriculturists and weaker section of the community through Co-operatives to strengthen their economic condition.

The Orissa State Co-operative Bank during last 33 years of its service hae attempted to fulfill the role assigned to it.

Reorganisation of PACS

Under the recommendation of the Rural Credite Survey Committee reorganisation of PACS started in Orissa. During last sixties under recommendation of Sir Malcum Darling, Service Co-operative Societies were established by reoganisation of Small Sized Agrilcultural Credit Societies. This resulted in creation of viable service Co-operative Societies with limited liabilities having godown-*cum*-Office, full time paid Secretary, Government Share Capital assistance under LTO, managerial subsidy at the initial level, linking of credit with marketing, providing fertiliser and pesticides in kind as 'b' Component of loan, supply of consumers goods and other essential commodities etc. On the recommendation of Bawa Committee, LAMPS have been organised for the benefit of the tribals. So far 222 LAMPS have been organised covering the entire tribal sub-plan areas of the State. These LAMPS are financing all types of agricultural loans including consumption credit to the tribals, marketing of minor forest produce procured by them and supplying them essential consumers articles.

All the 17 CCBs, in the State at present are working satisfactorily. It is happy sign that during the Co-operative Year 1980-81 all the 17 CCBs. have been classified as A-Class in Audit and the audit of all the CCBs. in the State is upto date inspite of inadequacy of auditors.

S. T. Agricultural Credit

Out of 36·72 lakh agricultural families 23·58 lakhs families have been enrolled as members of PACS. So far 25 per cent of the total credit requirement of the agricultural families is met and 64 per cent of the agricultural families in the State have been covered by the Co-operative.

The State Co-operative Bank which is the pioneer of the Co-operative programmes in the State assists in financing ST credit for purchase of seeds, fertiliser, pesticides and for other seasonal agricultural operations. The advance of ST credit in the State financed by the OSCB is as under:

1976-77	..	Rs. 21·69 Crores
1977-78	..	Rs. 24·49 Crores
1978-79	..	Rs. 39·48 Crores
1979-80	..	Rs. 38·49 Crores
1980-81	..	Rs. 54·48 Crores

There is a programme for financing Rs. 67 crores of ST agricultural credit. during the current Co-operative Year.

MT Agricultural Credit

The Orissa State Co-operative Bank assists the PACS in financing MT credit for minor irrigation, dairy, poultry. fishery etc. The financing of MT loans has increased considerably during the last 5 years. Purpose-wise finance of MT loans during 1980-81 is as under:

		Rs. in lakhs
Dairy	...	109·33
Poultry	...	3·08
Sheep & goat	...	121·97
Minor Irrigation	..	182·37
Other purposes	..	409·89
Total	...	826·64

LT. finance from ARDC

In collaboration with the ARDC., the bank has entered into the field of financing long-term loans for agriculture, minor irrigation and fisheries. During 1980-81 Rs. 192·13 lakhs were financed for dug-well and other minor irrigation purposes for which special schemes have been prepared. The bank has also financed for purchase of pumpsets and energisation of irrigation projects.

Financing for marine fisheries under the ARDC., for Kirtania Fishermen Co-oprative Society has also been implemented.

Handloom and Industrial finance

The bank has undertaken financing to the weavers and artisans. During last year Rs. 40·93 lakhs and Rs. 5·83 lakhs were financed for weavers and industrial schemes respectively. The bank has provided cash credit facility to the Orissa State Co-operative Marketing Federation, Tribal Development Co-operative Corporation, Orissa Consumers Federation, Jute Marketing Society, Orissa Handloom Weavers Co-operative Society, Orissa State Powerloom Servicing Co-operative Society, Bargarh Co-operative Sugar Mill and Aska Co-operative Sugar Mill. Loans are also provided to Salary Earners through their societies and the financing banks. The bank has arrangement of lockers. It finances to individuals on pledge of gold ornaments. Its collection 100 per cent.

This Bank is also implementing a Rural godowning programme with the financial assistance from the World Bank (IDA). The programme envisages construction of rural godowns and godowns for the Orissa State Marketing Federation and Tribal Development Co-operative Corporation to create storage capacity of 2,10,000 tonnes involving investment of Rs. 5·00 crores. So far 464 Nos. of rural godowns 61 godowns for RCMS., 21 Nos. of apex organisation creating storage capacity of 82,000 tonnes have been financed by the Bank which amounts to Rs. 1·31 crores,

The State Co-operative Bank in order to strengthen its base is providing financial assistance and subsidy to Central Co-operative Bank at the rate of Rs. 10,000 for each new branch opened and has also provided Rs. 1·20 lakhs for grant of subsidy to different Primary Societies branches of CCB and CCB itself for their development.

The working capital of the bank has exceeded Rs. 100 crores. As it is a Scheduled Bank, it is governed under the Banking Regulation Act by Reserve Bank of India. Its deposit has increased from year to year as given.

(Rs. in lakhs)

	1977-78	1978-79	1979-80	1980-81
Fixed Deposit ..	1,535·40	2,002·21	2,609·98	2,589·72
Savings Deposit ..	34·56	82·47	135·93	212·16
Current Deposit ..	322·80	235·69	276·17	691·26
	1,892·76	2,320·37	3,022·08	3,493·14

The CCBs. have opened branches at important block headquarters. The Orissa State Co-operative Bank has a branch at Cuttack and has opened a branch at Paradip recently.

Managing Director
Orissa State Co-operative Bank Ltd.
Bhubaneswar

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ORISSA STATE FINANCIAL CORPORATION

O. M. P. SQUARE
CUTTACK-753003

TELEPHONE : 22659 **TELEGRAM : FINCORISSA**

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Entrepreneurs have voted us to strength and vigour most generously in recent years. Here is our index of health in 1st 20 years and thereafter.

(Rs. in lakhs)

Age		Sanction	Disbursement	Recovery
		Rs.	Rs.	Rs.
1—20 years	..	21,63	13,03	6,21
21—24 years	..	63,80	37,03	13,68

Believe it or not we extended assistance to 7,564 units and all the rest 17 SFCs. of the country assisted hardly 15,000 units during the year 1980-81.

We renew our solemn pledge for dedicated service in the 'Silver Jubilee Year' and ever after.

Managing Director

Development of Fisheries in Orissa

SHRI P. MOHAPATRA

Inland Fisheries

In inland sector, the State has 2,02,000 hectors of cultivable water area which can be really taken up for pisciculture Besides thera are 1.80,800 hactares of inland swampy area which can also be developed for pisciculture, from the Inland sources the estimated fish production is about 32,530 tonnes (1980-81), Besides there is ample scope for development of brackish water fisheries in the State.

In order to exploite the above resources, steps were taken during the inception of this department to establish pond culture. Subsequently, the need for supplying fish seed to the fish farmers were thought upon and steps were also taken to supply the fish seed through collection of riverine spawn. But in course of time, due to indiscriminate capture of brood fishes in the different river systems of the State, spawn from riverine resources failed to meet the growing demand of quality fish seeds. To overcome this difficulty, production of quality spawn were taken up by method of hypophysation. During the year 1980-81 the production of quality fish seed was 1,703·99 lakhs as against the target of 1,605·00 lakhs which was highest in the hierarchy of the department. However, by the strenous effort this years achievement in regard to production of quality fish seed by hypophysation could surpass the last year's achievement and the qnantum is 1937 lakhs. Besides, the usual collection of riverine spawn is 914 lakhs during this year, 1981-82. Out of the Spawn, 542 lakhs of fry were produced and distributed to different Grampanchayats and private pisciculturists for stocking in pond for production of fish.

The Scheme on demonstration of intensive pisciculture in private tanks has created a good impetus among the fish farmers of the State. The Scheme aimes at giving 100 per sent subsidy towards input@ Rs. 5,000 per hectare by which the production of 6 to 8 quintals of fish is aimed at per annum. Under this scheme, 77 hectares of private tanks in 13 districts of the State have been utilised in intensive pisciculture and 230 beneficiaries could avail the subsidy of 3·62 lakhs during 1980-81.

In 9 fish farmers development agencies (now working at Balasore, Cuttack, Puri. Ganjam, Phulbani, Sambalpur, Balangir under World Bank assistance and Mayurbhanja, Dhenkanal under Central assistance) 1349·98 hectars water area belonging to 1243 beneficiaries have been developed. A sum of Rs. 64·47 lakhs has been sanctioned as loan by the financing banks and Rs. 3'65 lakhs have been released as Government subsidy in favour of the beneficiaries.

Orissa Fish Seed Development Corporation on World Bank assistance has been setup to produce quaiity fry through modern hatcheries. Approval on plan and estimates for construction of two such hatcheries at Binka and Chiplima has been obtained from World Bank and for the rest two, site selection is in the process.

The Scheme E.R.R.P, aims at benefitting the rural poor (whose annual income does not exceed Rs. 1,200) through tank fisheries and reservoir fisheries, 190 beneficiaries covering 98·90 acres of water area of 58 blocks have been inducted under tank fisheries. A sum of Rs. 9·61 lakhs has heen utilised on this scheme during 1980-81 by giving them 1/2 acres of tank on lease basis. Fishing in reservoirs by the poorest families in 9 reservoirs, 700 fishermen have been inducted under rhe scheme during the year 1980-81. A sum of Rs. 13 lakhs has been utilised in this regard, towards supply of 100 boats and nets.

Research work in Fisheries

One all India Co-ordinated Research Project in fresh water fisheries is functioning at Kausalyaganga in Puri district as a joint venture between the State Government and I.C.A.R. to suggest the best percentage composition of fish seed to stock in an intensive pisciculture tank and suggest the input regulation. This unit have also taken up some demonstration tanks to train up the interested pisciculturists in intensive pisciculture. The work under this programme is continuing.

Another All-India Co-ordinated Research Programme in Brackish Water fisheries is functioning at Keshpur in the district of Ganjam. The aim of this project is to suggest the proper maricultural technique to be adopted in Brackish water fisheries of the State. Besides this 10 survey centres have been established at the esturine points along the coast for survey of suitable sites for Brackishwater fish culture and availability of fish and prawn seed and steps are being takan to establish a prawn hatchery at Paradeep,

Besides one C. I. F, R. I. sub-station is functioning at Cuttack and Kausalyagang. Their research finding on food requirement of fish and intensive pisciculture have been taken up on an adoptive scale by our department for pisciculture in I. T. D. P., E. R. R. P. and other tanks.

Marine fisheries

Orisse has a coast line of 480 Kms. with a continental self of 25,000 Sq. Km. The sea of Orissa is rich in pelagic and demarsal fishes. With the introduction of mechanised boats, establishment of infrastructural facilities, issue of feasibility reports to construct boats in the private sector with institutional finance and formation of co-operative societies considerable progress has been made in the marine fisheries sector of the State. There are at present 764 Nos. of mechanised boats consisting of 309 Nos. of gillnetters and 455 Nos. of trawlers. The catch from the mechanised boats is about 20,800 tonnes out of the total marine fish landings of the state of 38,700 tonnes.

Brackish water fish farming

There are rich potencialities for Brackish water fish farming in the State which can roughly be estimated to be 50,000 hectares. This Department have undertaken to cover during last two years 14,756·63 acres and issued feasibility reports to provide Individuals for 2,848·36 acres. Demonstration tanks through MPEDA in Balasore district have revealed that the prawn culture is quite profitable and it can yield upto 200 Kgs. large prawn and 200 Kgs, small prawn per acre. Since prawn is exportable to foreign market, a brackish water fish farmer can earn about Rs. 10,000 to Rs. 15,000 per acre per annum. The low lying lands in the tidal region lying unproductive may yield quite a sum of foreign exchange by proper farming and exploitation.

No subsidy has yet been provided under the scheme for Brackish water fish farming as a result of which there is little progress of financing at bank level to the recommended individuals with loan to the extent of 100 per cent without state Governmant guarantee or subsidy. Hence subsidies at the rate of 25 per cent of costs is proposed to be provided through the Ministry of Agriculture, Government of India.

Chilka Lake

Chilka lake is the largest Brackish water lagoon in India, with an average area of 1055 Sq. Km. The average annual production is about 4500 tonnes of which about 20 per cent to 25 per cent are Prawn, There is no definite indication of depletion of stock though the catch per unit effort has gone down, which is due to the increase No, of active fishermen operating in the lake. Development of lake fisheries has been drawing the attention of the Fisheries Scientist since long and a few fisheries project reports have been prepared, the latest one being in 1978. For examining this Project report Government of India constituted a committee headed by previous Fisheries Advisor to Government of India who have made certain recommendations.

But on the whole, the State Government feel that the mouth of the lake which is the route for immegreation of fish fry and prwan juveniles and also migration of brood stock fish and prawn to the sea should be kept open and suitable environmental conditions maintained inside the lake so that the ecological condition will lead to increase production considering the abundance of the natural food available in the lake. The main necesslty for development is dredging of the lake mouth and the 30 Kms. outer channel linking the lake to the sea.

The problem relating to deepening and widening of the Pallur channel in the southern and of the Chilka lake has been agreed by all concerned and steps have been taken by State Government for executing the work.

Additional Director of Fisheries

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(*From Page 10*)

Transfer of land

Effective steps have been taken due to the kind personal interest of the Chief Minister and the Minister, Agriculture & Co-operation to have the campus area of this University demarcated and all adjacent vacant lands transferred in the name of the University so that the long neglected problem of repairs to the roads and drains in the University campus could be attended to as soon as the land is transferred, besides taking up construction of new college/hostel buildings/staff quarters on the vacant lands and general ecodevelopment of the campus. Advance action has been taken on this and the Government in the Agriculture and Co-operation Department have also agreed to provide necessary funds for the purpose of repairs of roads and drains. The D. P. P. section will take up maintenance of the internal roads as well as existing buildings in the campus and the Regional Research Stations and this section is being strengthened to ensure proper maintenance of these buildings, roads and other structures.

Telephone facilities

A proposal is being examined to see that the better and more telephone facilities are provided by strengthening the P. B. X. of the University as a reasult of which a larger number of employees could get telephone facilities.

Vice-Chancellor
O. U. A. T., Bhubaneswar

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Focusing Attention on Forest Development in Orissa

SHRI M. C. DAS

It is often said that the three basic human needs are food, clothing and shelter. One cannot think of food and shelter without wood, which is a primary need. In the rural areas the importance of forest which provides essential cooking fuel, timber for agricultural implements and housing and pasture for the cattle is obvious enough. Important as forests are to human well being, knowledge about their extent or the rate at which they disappearing is surprisingly inadequate. Orissa which had over 67,000 Kms^2. of forests a few years back, is now reported to have only about 60,000 Kms^2. and many of these are seriously depleted due to biotic pressure. According to satelite survey report, only about 55,380 Kms^2. are with vegetal cover. Underlying all the sources of deforestation to varying degrees is, of course, human population growth. Curiously although substantial information is available on the economic gains from the exploitation of forests resources of the State, virtually non-exist on the economic consequences of a failure to put forestry on a sustainable footing. Through strict enforcement of forest Conservation Act 1980, further deforestation of forest lands for non-forestry uses has been controlled and regulated as intended in the national policy. Planning in the forestry sector of the State aims at "Development without Destruction", the major areas of attention being directed towards ecological balance, employment generation, increasing productivity and economic upliftment of the rural poor.

The management system adopted for the natural forests in the Working plans of the State have been suitably readjusted to discourage clearfelling in any form and adopt, as far as possible, selection system of working which is ecologically desirable as it achieves conservation of the environmental quality to the maximum extent. It is aesthetically also the most attractive system which affords the maximum protection to the resource base against climatic vagaries. In order to increase the productivity and capital value of the forest so as to achieve self-sufficiency in meeting economic, industrial and constructional needs, 19,797 ha of plantations of economically valuable and commercially useful species were taken up in different forest divisions under production forestry schemes between the years 1979 to 1981 at a cost of Rs. 158·99 lakhs. To meet the everincreasing needs of fuelwood and small timber in the State, 21,304 ha were planted under the scheme of Mixed Plantation, 7,039 ha of degraded forests were rehabilitated and reforested during 1979 to 1981 and in Cuttack, Puri and Balasore districts 3,839 ha were planted up under the new scheme of Rural Fuelwood Plantation during 1981 at a total cost of Rs. 227·09 lakhs under the Social Forestry programmes. Social Forestry has become an accepted notion of land management in the State. A project for international aid has been submitted to the Central Government for expansion of Social Forestry activities in the coming years. Between 1979-81, about 7,647 ha of Coastal Shelter belt has been raised by planting casuarina along 1 Km. width of the sea shore at a cost of Rs. 164.19 lakhs. This scheme is intended to provide a physical barrier to reduce cyclonic damages and minimise sand-casting of the hinter lands in the coastal districts. To promote farm forestry on private lands, 77.35 lakh seedlings were distributed during this period and Forest Extension workers were posted at the Block level to motivate the people to accept forestry as an alternate form of land use on their wastelands and marginal farm lands for better economic gains and self sufficiency in wood materials. Afforestation for soil and water conservation in the catchment areas of Hirakud, Machhkund, Rengali and Mandira river valley projects was taken up over an area of 7,530 ha and rehabilitation over 3,960 hectares between the years 1979 to 1981 at a cost of Rs. 82·72 lakhs. Besides the above schemes, plantations under DPAP, DRDA, Special Central Assistance and Central Plan Schemes such as Potteru Compensatory afforestation were undertaken during the period. The total physical coverage in the State between 1979 to 1981 was 81,155 ha of plantation, 22,030 ha rehabilitation, 2,673 row Km. avenue planting and 146·87 lakhs of seedling distribution. About 50 per cent of the above programmes was executed in tribal areas. In the above process about 1,741 ha of village forests, which hitherto had remained unproductive, were activated through tree planting. Under the programme **"A Tree for a Child"**, about 6·17 lakh seedlings were distributed to 2·64 lakh children in the State for planting and aftercare to inculcate tree consciousness in them. N. S. S. Camps of for tree planting and improvement of environment was organised at Rourkella, Khurda and Bhanjanagar during 1981 by the three Universities for which the forest department rendered necessary technical help with material inputs. One ha of plantation provides about 200 mandays of employment. Thus plantation forestry activities have been beneficial components in the States' employment generation programme.

Opening up of inaccessible forests through construction of forest roads is an essential pre-requisite for fuller utilisation of the forest resources. During the years 1979 and 1980 about 65 Kms. of new roads were constructed, and 48 Kms. of existing roads were improved through construction of culverts and bridges at a cost of Rs. 8.24 lakhs. Because of increase of theft and pilerage of forest produce from the forests in the recent years, a joint scheme of forest protection is currently under implementation by the forest and Vigilance Departments. This scheme has proved quite effective in checking smuggling and detection of evasion of taxes on sale of forest produce. During 1979-80, 52,696 forest offences were detected and Rs. 22·46 lakhs was realised as compensation from the offenders. A nucleus forest protection force, with arms consisting of Mobile Squads at Circle level and checking staff units at the Division level has been constituted to intensify forest protection measures.

In keeping with the industrial policy of the Government, a sal oil solvent extraction plant has been newly set up in Koraput and a tannin extraction unit and two bamboo-*cum*-hardwood Sabai based Paper Mills are likely to come up shortly in that district in the private sector. Asabai based mini-Paper Mill is also likely to be set up shortly in Mayurbhanj district by a new enterpreneur. The two Forest Corporations of the State are gradually diversifying their activities and taking steps to set up wood based and other minor forest produce based industries in the public sector. Some joint sector projects are also under contemplation.

The Nandankanan biological park, which is one of the premier bioaesthestic complexes of the country, has undergone considerable improvement in the past two years to provide better amenities to the visitors. A number of new animals were added. Captive breeding of gharial crocodiles in this Biological park is an important programme currently under implementation with central assistance. A lion safary park in collaboration with ITDC is being laid out at Nandankanan complex to promote tourism. An open air White tiger enclosure has been recently inaugurated. The Toy-train which was out of use for quite some years has been re-commissioned to the delight of the young visitors to the Zoo. The adjoining Chandaka forest has been constituted a sanctuary to afford protection to the Wildlife therein and to provide a buffer zone to the biological park. The pair of normal Royal Bengal Tigers which had earlier created history by giving birth to a litter of three white cubs have repeated another litter of two white cubs recently. Under the scheme of development of National Parks, Sanctuaries and Nature Reserves, two crocodile sanctuaries are being managed at Bhitterkanika and

Tikarpara where captive breeding and research projects on Gharial, Mugger and salt water crocodiles is being continued. The hatchlings have been released into their natural habit at in the sanctuary for multiplication. The sea turtle project is a unique wild life development activity implemented in this State. In the Chilika bird sanctuary, ringing of birds as a part of the Avi-fauna project of the Bombay Natural History Society is currently in operation. 2,175 birds of 52 species have been identified and ringed. In the Similipal Tiger Reserve, the Project tiger is being continued with central assistance for conservation and multiplication of this endangered species. The tiger population which was estimated to be 17 during the year 1972 has increased to about 69 in the year 1980 in the project area.

To meet the needs of technical manpower for carrying out the development activities in the forestry sector, a Forest Rangers College has been opened by the State Government where 40 per cent of the capacity, as per principle laid down by Central Government for forest education, is made available to other State to get their candidates trained in forestry.

Forest is our legacy from the past and must be bequeathed to the posterity in as intact and healthy a State as possible. Contrary to popular belief, it is not an inert substance, but a fragile and almost living organism of unrivalled complexity. It constitutes one of the most important renewable natural resources of the State and is the largest single band use next to agriculture. Although the State had a rich heritage of a wide variety of flora and fauna, in the recent years the frontiers of the forests have receeded alarmingly and the gap between demand and supply of forest products has been growing wider. Development of forest resources by providing additional inputs into the forestry sector can only bridge this gap in forseeable future.

Conservator of Forests, Cuttack

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"COMPUTER IS A LABOUR SAVING DEVICE AND NOT A LABOUR DISPLACING SERVICE"

The first-ever seminar on "Computers in State Administration" organised by Board of Revenue, Government of Orissa in Soochana Bhavan, was inaugurated by Chief Minister Shri J. B. Patnaik on November 29. Welcoming the step taken, the Chief Minister was of the view that the use of Computer in State Administration could be many and varied. He felt that a computer data bank at the disposal of one department could be made use of by others and thus help avoidable duplication. Computer, the Chief Minister held was a labour saving device and not a labour displacing service. He however cautioned that application of computerisation should not throw up human problems, and the benefits obtained should be commensurate with the expenditures incurred.

Orissa's Tourism— The Great Leap

SHRI A. N. TIWARI

Situated on the eastern sea board of India, Orissa is richly endowed with luxuriant beaches, lush green forests with enchanting flora and fauna, captivating Chilka Lake and monuments of breath taking splendour. Its textiles, silver filigree and handicrafts offer an added attraction. This tourist potential almost lay hidden like an ice-berg exposing just a small tip till **Shri J. B. Patnaik, present Chief Minister of Orissa appeared on the sence. With his deep appreciation of Orissa's wealth in tourism he rightly characterised this as a package of recreational tourism, cultural tourism, wild life tourism and hill tourism.** The outlay for tourism which was a meagre Rs. 57 lakhs in the Fifth Plan period was increased to Rs. 325 lakhs in the Sixth Plan and a massive exposition of Orissa's tourism was mounted both in India and abroad. For the first time recognition dawned all over the world that Orissa in India was the destination for "Tomorrow's Tourism".

2. The focal point of development continued to be the Golden Triangle embracing Bhubaneswar, Puri and Konark. The majestic temples piercing the sky line of Bhubaneswar, have their own story of architectural excellence to tell. Lord Lingaraj is the presiding deity with its fort like premises. But, the temples of Rajarani, Mukteswar and Brahmeswar also cast their spell on visitors. Efforts are on to install a Son-Et-Lumiere in the second centrury B. C. caves of Khandagiri Udayagiri on the outskirts of Bhubaneswar. This will fulfil a long-felt need. The Zoological Park at Nandankanan, Ashokan edict and Japanese Pagoda at Dhauli and the Hot Springs of Atri have since been embellished in the glittering Golden Triangle.

3. Puri has always occupied a premier position in the cultural and religious firmament of the country because of the temple of Lord Jagannath. The sea beach at Puri has been adjudged as one of the best in the world. The Sun-Temple at Konark has defied human comprehension for its breath taking architecture and has been a cherished destination for international and domestic tourists.

4. The other focal points that are proposed to be developed for international tourists are the 11,000 Sq. Kms. Chilka Lake and the 8th century monuments of Lalitgiri, Ratnagiri and Udayagiri. A Master Plan for Lalitgiri, Ratnagiri and Udayagiri is under preparation with the help of Government of India. 36 bedded cottages have recently come up at Barkul on Chilka Lake. These cottages and the Tourist Bungalow at Rambha will help in meeting the accommodation problem of destination Chilka.

5. In accordance with the new concept, two Travel Circuits have been identified in Orissa. These are—

(i) Bhubaneswar—Puri—Konark—Dhauli—Ratnagiri—Lalitgiri—Udayagiri—Bhadrak—Chandipur Khiching—Jashipur (Similipal)—Bhubaneswar.

(ii) Bhubaneswar—Chilka Lake—Gopalpur On See-Taptapani—Koraput—Bolangir—Sambalpur Angul (Tikarapara) Bhubaneswar.

6. All resources from Centre, State and private sectors will be pooled for development of infrastructures along the Travel Circuits so as to conserve the scares finance and promote tourism in the recognised centres.

7. In pursuance of this strategy a Rs. 168 lakhs Marine Drive linking the internationally famous tourist centres of konark and Puri is under construction and is scheduled for completion by June, 1982 as per a time-bound programme prescribed by the Chief Minister. When completed this road will pass through some fascinating land scapes in Orissa besides reducing the distance between Konark and Puri to just 35Kms.

8. Realising the importance of tourist growth centres of Konark-Puri sea beach, a Master Plan has been prepared for the entire beach along the Marine Drive. Foundation of a hotel complex of 25 cottages at Konark and a 50-roomed hotel at Puri by I. T. D. C.—O. T. D. C. combine is proposed to be laid in January, 1982 as a New Year's gift to the State. As a gesture of goodwill, Government have given the premises of Raj Bhavan at Puri on lease to the said hotel complex. Two Beach Resorts in the public sector with about 100 cottages are planned near the Balukhand reserve forests between Konark and Puri. A 100-roomed modern Dharmasala in Puri and a Tourist village on the Marine Drive about 6 Kms. from Puri will be some notable acquisitions in the near future.

9. The International Travel Writers from 14 countries who visited Orissa recently have described Orissa as an untrammelled State, so refreshing, so steeped in history and with so much old world charm that any tourist who sets out to discover it will certainly be amply rewarded. In their words the virgin beach in Orissa will be a delight for tourists. With a view to preventing speculation and promoting development of infrastructure, Government have issued instructions for freezing land lease along the Marine Drive.

10. A determined effort is being made for revamping the much needed infrastructure in the Golden Triangle. M/s. Oberoi have been given a lease of 12 acres of land at Bhubaneswar for construction of a Five-Star Hotel. The present I. T. D. C. Hotel of Kalinga—Ashoka at Bhubaneswar is being expanded to 200 rooms with facilities of Swimming Pool and Convention Hall. About 16 hotel sites have been allotted in the Capital for the middle and high spending groups. The Railway Hotel at Puri is under expansion and the Hokee Group of Hotels from Japan have plans to put up a hotel at Dhauli. At the current pace of development, facility of additional 500 hotel rooms for high spending groups will come up in about two years time. There will also be substantial increase in hotel accommodation for the middle and lower income groups.

11. Appreciating the need of a direct air link between Delhi, the first landing point of international tourists and Bhubaneswar, the present Government moved Government of India and accordingly a Boeing link was established between Delhi—Bhubaneswar, Bhubaneswar-Calcutta and Bhubaneswar—Hyderabad. The fast Neelachal Express succeeded in bring Delhi nearer to Orissa. The improved communication had a salutary effect and the flow of international tourists which was 18,970 in 1978 increased to 23,941 in 1980. The number of domestic tourists also went up from 1,85,735 in 1978 to 2,84,614.

12. Need for infrastructural facilities for domestic tourists has been well appreciated. The O. T. D. C. runs a chain of middle level hotels known as "Panthanivas" covering 270 beds. New buildings for

Panthanivas are coming up at Chandaneswar Panchalingeswar, Ardi, Gupteswar, Rourkela and Sunabeda. A Master plan for putting up 17 Motels in phased manner on the National Highways and important State Highways has been finalised. Two of these Motels at Bhadrak and Angul are being set up in the State sector. The O. T. D. C. has already acquired 9 (nine) Luxury Buses including 3 Air-conditioned buses which are being utilised for organising conducted sight seeing tours for tourists. This has come as a fitting complement to the tourist facilities of the State.

13. It is heartening to note that there has been a much needed appreciation of the need of effective promotion of tourism of the State at all levels. This has also created a new sense of awakening amongst the youth who find in it a significant opening of employment facilities besides creating a multiplier effect on the economy of the State.

14. The present Government have launched a massive programme for all-round development of the State. The dream of 1,000 Industries is taking concrete shape, the Rs. 1,500 crore Aluminium project and the Rs. 3,000 crore Steel plant at Paradeep have already become a reality. Government have given a great fillip to hotel construction by declaring hotel as an industry enabling it to all incentives in the Industrial policy Resolution. This intensive development of the State is bound to activate the flow of tourists both international and domestic and the day is not far off when Orissa will find its rightful place in the international map of tourism. It has been well said that the fragrance of Orissa's tourist potential has spread far and wide and tourists, hoteliers and industrialists are making a bee line to this State of a mighty future.

Secretary, Tourism, Culture and Sports

DEVELOPMENT OF DHABALESWAR AS A TOURIST POINT

The Dhabaleswar island has the potential for development as a spot of pilgrimage and relaxation and a completed master-plan for beautification and development of the island will be taken up within a time-bound frame, said Shri A. N. Tiwari. Secretary, Tourism, Culture and Sports.

At a meeting held at Dhabaleswar on November 5 under the Chairmenship of Shri Tiwari, it has been decided that a detail survey in respect of the temple. location of the buildings to be built and plantations will be taken up very soon and this will be completed by the first week of December this year. The important aspects of the development of the island are, (*i*) removal of temporary and unclean ugly-looking sheds around the temple, (*ii*) construction of suitable shops which would affect the beauty of the temple, (*iii*) a panthasala on two acres of land overlooking the Mahanadi towards Cuttack to be set up by the Tourist Department. (*iv*) provision of a restaurant. (*v*) a deer park and a children park in the neighbourhood, (*vi*) development of the existing two-room Rest house of the Endowment Department, (*vii*) provision of boats for providing approach to the island from Cuttack and Athagarh side and, (*viii*) abundant plantation of flowering trees and shrubs.

This hill island which is the abode of Lord Shiva known as 'Dhabaleswar' will be a destination point both for pilgrims as well as tourists in search of relaxation and quiet in the sylvian sorrounding of the Mahanadi.

Historical Remains at Mukhalingam

Dr. KRUSHNA CHANDRA JENA

Mukhalingam is a small town now in the Sreekakulm District, Andhra Pradesh. It is predominently inhabitated by Oriya Bramhins. The language policy of the Andhra Government has discouraged the Oriyas to stay here and most of them have left for the neighbouring Oriya towns. Some of them have gone to bigger cities in Andhra in search of employment. In the last few years, the census reports indicate that there has been large scale emigrations of the Oriyas from this place.

Mukhalingam is an unattractive and unimpressive town from economic point of view. But from historical point, it is one of the important centres. It is believed that this was the Capital of the Gangas. The Gangas, who had their sway in Karnatak had one of its branches in Orissa. They were the Eastern Gangas. The Western Gangas had an interesting period of History in Southern India. For a long period they fought the Rastrakutas of Talkad and were responsible for the rise of a new cultural force in that region. Some of the finest structures were erected by them. When they came to Orissa, they brought with them some of the cultural trends with them.

There is difference of opinion regarding the first homeland of the Gangas. Dr. Rajguru refutes the Madala Panji which says that the Gangas first lived in Karnatak. Dr. Rajguru contends that they first lived at Gangabadi in Madhya Pradesh and then moved to Karnatak and possibly from there, they came to the Eastern side. Prof. Sheik Ali, Prof. Rangaswamiha and Dr. Sivan hold different views and claim that the Gangas originally lived in Karnatak.

However, the Ganga rulers in Orissa built many temples. For sometime, the Mahendra was their capital. The present town of Mukhalingam was also one of their capital towns. Historians believe that the present coastal town of Kalingpatanam was also a capital at a different time. We have three places very close to each other—Mahendra, Mukhalingam and Kalingapatanam, all are connected with the Ganga administration in Orissa. The temples of Mahendra, some of them are the earliest temples; constitute a major chapter in the study of ancient temples of the country. The period of construction is spread over a long period; obviously the temples represent different periods of construction.

At Mukhalingam, there are several temples. Some of them are lost and some of them are fast falling down. There, a large number of slabs falling here and there, obviously, formed parts of temples. One gets an impression that at Mukhalingam, there must be hundreds of temples in its glorious period. The same impression one makes also at the top of the Mahendra Mountain. One would feel as if temple making was the only thing the kings and their subject were interested in. At Mukhalingam, there are no high mountains—there is only a small hillock. There is a very small structure on this hillock.

The main temple at Mukhalingam is the temple of Madhukeswar. The temple is vibrantly sculpted and stands on the banks of the river Vamshadhara.✓ Critics have taken the Madhukeswar temple as one of the exciting temples. Both in architecture and decoration, it has special distinction. A speciality of this temple is that there are no Parsva Devatas here as are usually found in other Orissan temples. In the construction of the Sikhara, it represents a separate category. Normally in the Orissan tetmples the Sikhara contained four lions placed in the four directions. There would be a Kalasa in a Siva temple and a Chakra in a Visnu temple. The Sikhara of Madhukeswar temple consists of a series of receding pidhas.

From decoration point of view, the temple contains many beautiful images. Siva has been shown in different poses and moods. At one place, He is holding a snake with upraised hands and dancing. Here he has posed as urdhva linga—erect phallus In many other temples of Orissa Siva has been depicted like this. The image of urdhva linga was not much used in the later temples of Orissa. At another place in the Madhukeswar temple, Siva is depicted as Andhakasuramurti. This is an interesting image. Here Siva is wearing a string of human skulls and with urdhva linga. Parvati is at his side. There is an image of Siva dancing with Parvati. Nandi and Ganesh are also there. There is an image of Siva with twelve arms. He is dancing with great vigour. Almost all the images of Siva are in vigorous dancing form and this depicts the boundless energy that reflected the spirit of the period.

Other images in this shrine include those of Ganesh, Kartikeya,, Durga and Nandi. There is a special image of Narasimha. Here the God symbolises anger in its best form. He is holding Hiranyakasipu from the ground and tearing him into pieces. The image is in detail and the hair of the demon and the mane of the lion can be observed.

There is an interesting erotic image on the Mukhasala of the Madhukeswar Temple. In Orissa, there are many temples where erotic images are seen in plenty. Sex relationship between man and women, man and two women and sometime beastality also has been exhibited. We are not sure the exact purpose of this erotic representations on the walls of various temples of Orissa. Khujoraho is another place, where sex life has been so frankly accepted. There are a few other places in the country, where erotic images have been so numerous as in Orissa. At Mukhalingam, on the Mukhasala of the Madhukeswar temple there is an image of a couple engaged in sex as normally animals do. The man is behind the woman. A similar image is found in the Satrughneswar temple of Bhubeneswar ; a man having sex from behind a woman in standing position. But, there is difference between the two images. In the Satrughaneswar temple the face of the woman is hidden, we are not able to find out her feeling. On the other hand, the mithuna couple of Madhukeswar clearly indicate a feeling of great joy. The woman, who is normally a silent partner in almost all the erotic images of Orissa, expresses great cooperation and joy. The woman is holding a walking stick in her right hand and looking back towards the partner. Normally, in other places, the woman is rarely seen with a walking stick. Here, why the woman is holding a walking stick ? Could it be possible that she is old and wanted a support ? Does this mean that old age was not a bar for sex? The man is in trimphant joy, the right hand raised over the head of the woman and the first finger is pointed to the audience. He is holding the woman in the left hand.

The Madhukeswar temple has a few other special features. The doors and windows are not placed in a regular pattern. There is no separate joint between the shrine and the Mukhasala. The hairdo of the male figures is different from the normal hairdo existing in other temples of Orissa. Similarly, difference is observed in the ornamental work on the walls of the Madhukeswar temple.

✓Besides the Madhukeswar temple, there are other historical remains at Mukhalingam. There are a few primitive temples which must have come much earlier to the more sophisticated Madhukeswar temple. One such is the Bhima temples. It is believed that the Pancha Pandava visited this place. While they were here, they built temples. The Bhima temple is constructed with huge pieces of stone slabs. The slabs could have been raised by use. This temple is attributed to have been built by the great Bhima. Normally, wherever there is use of great mascular force, people use the name of Bhima. Bhima had dedicated this temple for Siva. Such Siva temples dedicated to Bhima are also found at the top of the Mahendra. There also, huge pieces of stone slabs constitute the temple. A peculiar feature of this temple is that the whole roof is covered by stone slabs the kind of which is not normally seen in other parts of Orissa. In Cuttack, Puri and Balasore districts of Orissa we have the maximum number of temples. They do not have a temple like this Bhimeswar temple of Mukhalingam. In Karnatak the use of stone slabs is popular. It could have been just possible that those who had migrated from Karnatak to Mukhalingam should have used their original art of stone cutting. This is possibly reflected at Mukhalingam.

There were a number of inscriptions on the walls of the Madhukeswar temple. They were covered with lime. The scholars from Andhra and Orissa have tried to dicipher the inscriptions. Special mention may be made about the contributions of Dr. S. N. Rajguru in this respect. The readings opened a new dimension in the study of the Eastern Gangas. There is an area of research which has not been properly taken up either by the scholars of Orissa or the South Indian scholars. This concerns the problem of the relationship between the Eastern Gangas and the Western Gangas. If scholars of Karnatak and Orissa take a joint venture, Mukhalingam might offer a virgin area of research in this connection. It is important that so far such kind of mutual study of the Gangas has not been successful.

Mukhalingam is fast losing its identity. Situated in almost an alien land, the "Orissa Temple" is losing much of its original glory. It may be not far away that the smaller temples and minor historical remains be lost to History. In a material age that of ours it is becoming more and more difficult for such historical remains to stand against the current of time and contain the historical message they have been carrying through the ages.

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Application of remote sensing for Soil and Land Use Planning in Orissa

SHRI G. MAHAPATRA

Remote sensing is a modern terminology applied to various fields of human activities, which means to precisely guess, assess or interprete objects or natural resources without coming in contact or going near to it. The successful launching of Earth Resources Technology Satellite (ERTS) by the National Aeronautics and Space Administration, U. S. A. (N. A. S. A) is a land-mark in the field and aroused great interests among both developed and developing countries for not only to activate their knowledge in space technology, but also to utilise the American Satellite—based data in various fields like Agriculture, Hydrology, Geology, Forestry, Town planning, etc. Orissa is one of the State, which has made a sober beginning of utilising the data in the field of Agriculture.

The first attempt was to compute land use statistics by utilising Satellite imageries of Orissa. A computer enhanced multi colour (twenty-three colours) map representing twenty-three different types of land uses, beginning from different types of forests, land under different crops, sand dunes, water bodies, etc., have been prepared and district-wise area under above different land uses have been computed. The above work has been done by tapping assistance from International Bank for Rural Development (I. B. R. D.) and the National Remote Sensing Agency, India (N. R. S. A.). The land use data is claimed to be more precise and accurate than that were being collected by conventional surveys.

A black and white image of Orissa from ERTS-I (LAND SAT-I) in Band 5—Dark tone areas are under forest.

The second project was to prepare a soil-scape map of the lower Suktel Irrigation Project lying in the district of Balangir. The soil-scape maps were prepared by visual interpretation of individual Land Sat-I M. S. S. imagery of the proposed command area of the Lower Suktel Irrigation Project. Integration of the final soil-scape map was done by superimposing the individual soil-scape boundaries drawn on different bands (Bands 4—7) shows that there is a great deal of coincidence with the soil map arrived at, by conventional grid methods. The soil map by Remote Sensing Technique seems to be more natural than the map arrived at by conventional grid method. The total mapping units by grid techniques is 94 whereas it is 100 by Remote Sensing techniques.

An attempt was made to estimate shifting cultivation areas in the district of Keonjhar in order to prepare project plans for land reclamation, plantation and settlement of tribals engaged in shifting cultivation in the district. For locating and assessing the area under shifting cultivation manual interpretation of B & W imagery in the scale of 1,25,000 of M.S.S. 5 was taken and the interpretation was done in the following manner.

(1) The map of Keonjhar was traced out on Koda trace from quarter inch toposheet of Survey of India in the scale 1:253,440 and enlarged optically to the scale 1:250,000 and transparency of the same was prepared.

(2) Another map on Koda trace was traced out from the transparency for demarcation of area affected by shifting cultivation. For this purpose, the hilly area was demarcated on the map from the quarter inch toposheet taking into consideration of the intensity of contour lines (closed contours depict hilly area) and any area having close contour and having lines equal or less than 1/64" of an inch approximately equivalent to 14-15% slope was taken as a hilly area and was demarcated.

(3) After demarcation of hilly areas the map was superimposed on the B & W imagery in M. S. S. 5 of scale 1:250,000. The M. S. S. 5 shows the highest contrast in distinguishing forest vegetation (dark tone), sparse vegetation (light dark tone) and no vegetation (white tone). The shifting cultivated areas have been demarcated on the map with a red dots with the help of mirror stereoscope. The mirror stereoscope has been used as a magnifier by campuflaging one side mirror in absence of illuminating magnifier.

(4) The area within the hills devoid of forest vegetation has been taken to be shifting cultivated areas. In addition artificial straight regular parcellins without vegetation in hilly blocks also confirmed the assumption that the destruction of vegetation has been done with biotic interference for shifting cultivation.

The computation of area under shifting cultivation has been done by transparent graph paper and was found to be 35,999·50 or 36,000 hectares.

From the estimation it was evident that the shifting cultivation area of all the districts of the State can easily be computed by Manual interpretation of (LAND SAT-I) imagery. However it needs certain ground truthing operations for further confirmation of the area. Morever the area estimated by Dr. H. F. Mooney for Keonjhar district was to the tune of 1,17,760 hectares (460 square miles) whereas it has been found to be 36,000 hectares only. It is claimed that this procedure is more precise since human error has been minimised in the process. Further the estimation by Dr. Mooney is neither backed by any statistical design nor has been arrived at by complete enumeration process.

Besides this attempts have been made to estimate area under wind erosion, area waterlogged as a result of irrigation projects, drought and dry soils under moisture stress, saline soils of Orissa, etc.

Soil and Land use Survey Organisation,
Orissa.

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Orissa and Jagannath

Late Dr. MAYADHAR MANSINGH

It could not be that the deity is the 'Lord of the Universe' (Jagannatha) did not belong to Orissa whose soil He has significantly blessed as His habitation.

Naturally enough, Orissa's glorious Gajapatis treated their sprawling empire as no more than a Trust from Him, to be looked after, in correct conscience themselves being only its humble care-takers. When they returned victorious from military expeditions which were almost day-to-day affairs in those spacious times, they surrendered all their precious spoils to Him as rightly His. And to the innumerable feudal chief of the empire, there was no greater moral curb to any sort of treasonable thought or behaviour against the central power, than the fear of dire divine retribution from the Omnipotent 'Lord of the Universe'.

If the Lord spiritual thus helped and co-operated Orissa's Lord Temporal in the down-to-earth daily matters of administration, he was never any distance away also, from Orissa's frequent military expeditions to neighbouring land. If the Oriyas won glorious military triumphs over all their national enemies, for over twenty centuries continuously, Orissa's king and chiefs of staff were wise anough not to arrogate all that glory entirely to their brawn, arms courage or their skills in combat-deployments, but attributed all that to the graces flowing out of Jagannath's lotus feet. The legend, so widespread in Orissa, and immertalised in painting, sculpture and poetry of Jagannath and His elder brother Balabhadra, riding on black and white charger, ahead of king Purusottam's Orissa Army, marching to wreak vengeance on the impudent Prince of Kanchi, is only the symbolic mythification of this universal feeling of the Oriya people that the great Lord Jagannath was an active participant in all their national as well as personal affairs and that whatever prosperity that fell to them either as a nation or as individuals was surely, merely His grace.

THE LORD OF COMPASSION AND DEMOCRACY

And this attitude of emotional detachment, reducing oneself to a complete zero, as preached in the Bhagvat Gita with such consistent vehemency, is not merely a bye-gone demonstration of history, but is being enacted today, even in these modern, god-less mechanical times, in and through the world famous Car Festival of Jagannath. Year after year, Orissa's still surviving titular Gajapati, the Raja of Puri, wields the symbolic golden broom-stick as like a scavanger, to sweep clean the road, before the Lord's chariot starts on His Journey of compassion, for the unwashed millions proclaiming to the whole world, by that very act, that he was no higher than the commonest of his subjects, before the king of kings, from whom only, all our worldly status and prospirity and all our achievements, rightly stemmed.

Jagannath, among all the gods and goddesses of the Hindu pantheon, is the God of Demacracy, par excellence. He alone, unliked all other divine celebrities of this great sub-continent was born out of the spiritual aspiration of the common man. If He came to Orissa's illiterate and unsophisticated Savara tribals in the dim past when perhaps even the earliest chants of the Rig Veda were not heard or known. He appeared also on the same plan of existence as that of His devotees, gladly accepting an open air habitat under a forest-tree, along with the crude food of His simple worshippers. He has kept up, through centuries, that kingship with the common folk, in the midst of royal luxuries that were showered on Him later on, demanding through the Car Festival, close association of the descendants of those pre-historical Savara devotees of His and remaining content with uncooked food such as the later offered Him in His forest hide-out somewhere on the bank of the Mahanandi.

In and through the car festival, Jagannath performs also the Bodhisattwa ideal of vicarious redemption, first to be promulgated in the world, by the Mahayani Budhists, but later to become the main plank of Christian theology. Rides forward and backward on the dusty Broad Way (Bada-Danda) of the holy city of Puri; in the celebrated car festival, not Jagannath, that is the Omnipotent 'Lord of the Universe' but He, who is All-merciful Patitapaban, the Redeemer of the Lowly, the Sanctifier of the contaminated. This is a reversion also to His days in the forest secrecy, in close association of and deep happiness with the humhle folk, wranching Himself from the royal grandeur in which He has been made to live by the successive royal dynasties of Orissa, inside the sanctum sanctorum. The Lord, out of His sheer merciful consideration for those millions of common men and women who lack the knowledge of books and have nothing but love in their hearts to offer Him, exposes Himself to the risks and rigours of a symbolic journey on a dusty road, familiar to these millions, just for the opportunity of showering blessedness on them all.

A SYMBOL OF NATIONAL INTEGRATION

If Jagannath is the people's god, in practising absolute castelessness, in proclaiming His faith in an egalitarian society and in his concern for the common folk in arranging for them, out of his grand kitchen, delicious, balanced food at cheap rates, He stands also as a spectacular symbol of National Integration, the free India's most burning problem. The blue stone that the Savaras had picked-up, is suppossed to be the fossilised un-burnt heart of Sri Krishna, thrown into the waves of the sea that had floated all along the Indian sea-board, to rest at last; on Orissa soil. In this interesting myth, we clearly see an attempt, at a spiritual link-up of the entire Indian sub-continent from sea to sea. If Jagannatha is Krishna, as well as Rama, He also is the Buddha, as the ninth Avatar of Vishnu. In his daily worship, the blue-blooded Brahmin gaily rubs his fair shoulders with the transformed but still dark-skinned aboriginals thus putting into daily practice, the most vital line of king Asoka in his famous Kalinga edicts-saba manisa me paja-All human beings are like my own dear children. Thus national integration has been a reality for centuries with Jagannath, though it might be much talked-of now at Delhi or Calcutta with hypocritical loudness.

ORISSA'S TRIBUTES

The grand concepts described above which are day-to-day realities around Jagannath's divine personality, have had deep impacts on Orissa's social life. If Orissa is the least caste-conscious State in India, the credit might directly be attributed to Jagannath. If the Oriya people as a whole have been so immensely benefited by their patriotic Rajas and Maharajas, it is because, there was the ideal standing before them all, of a whole empire being looked upon as a holy trust the Lord and no personal property of any body to be squandered away, according to one's personal whims.

As the Lord condescended to so completely identify Himself with the Oriya people, they on their part, have tried to offer in his services, the best that their culture could offer their dance, their poetry, their cuisine and all other luxuries they could think of Jagannath, in a vary real sense, may be said to be the costodian of the finest flowers of the Orissan way of living, least conteminated by outside influence. Rigorously rejecting such novelties as mill-sugar, patato or cabbage and tomato in his holykitchen, Jajannath stands also the most swadeshi, the most patriotic of gods in Hindu India.

The entire ancient and medieval Oriya literature is deeply charged with Jagannath cult. Many a precious jewel that Orissa's monarchs offered to the Lord has disappeared from his treasury. But the simple, passionate tributes that Orissa's post have paid to the Lord are shining in eternal light. This humble writer could not do better than ending this short sketch with the deeply devotional tribute that the greatest of Orissa's medieval posts, Upendra Bhanja, the most celebrated Romantic in Oriya literature, has paid to our Lord's Liberal personality, in his famous Kavya, Koti Brahmanda Sundari (The Most Beauteous in million words). says Upendrar—

" Let it be known even to those who know,
That there is a city in India that is so holy
For being the Lord's very tabernacle,
That its-very soil can redeem people
Of even the deadly sin of murder of holy men;
No less a person than Lord Shiva,
Standing witness thereto,
He. himself having left Kasi,
And taken up his residence here,
Convinced, that this is the very crown-jewel
Of all sacred places in the world;
Here, there is no need for expiatory penances
As, the twin holy acts of listening
To the resounding sacred music at the Lord's shrine
And partaking of His food offerings
Are enough to exercise one,
Of all the evil effects of sine.
The proud royal banner on the Lord's Tower
Loudly declares, therefore, but this—
" There is a more cherishable spot
Than this, in the whole world".
The eternally roaring sea,
Nature's moat to the Lord's Fort,
Does nothing but roar away, so to say,
All the spiritual ills,
Just through a mere dip in its waves;
for,
Jagannath, the Sovereign Lord of this Conch-city
Distributes blessedness to all castes
Without any discrimination;
Though to Him at whose feet
Even Lord Shiva bows in reverence,
The epithet of an earthly 'sovereign' is but mataphorical
People come in millions, from all quarters quarrers
To this holy city of Lord Jagannath,
As they have heard of a good Master
here,
Who is All-merciful and Compassionate
Redeeming the Lowly and all who are in distress.
Indeed through the twin festivals of Bathing and of the Car journey
It is as the Redeemer of the down-frodden
That the Lord comes out of His place, to broadcast
Blessings of Release and Redemption

On All and sundry.
Lucky indeed am I to have been able,
To this describe the glory of our Lord
And as I do this,
Each of my hair quivers
In sheer beatitude".
If this humble Upendra
Has had the renown of a Poet
Among his People;
What doubt, my Lord
Is there that that is but Thine Mercy,
The fulfilment, by Thee
Of mine humble Wishes?

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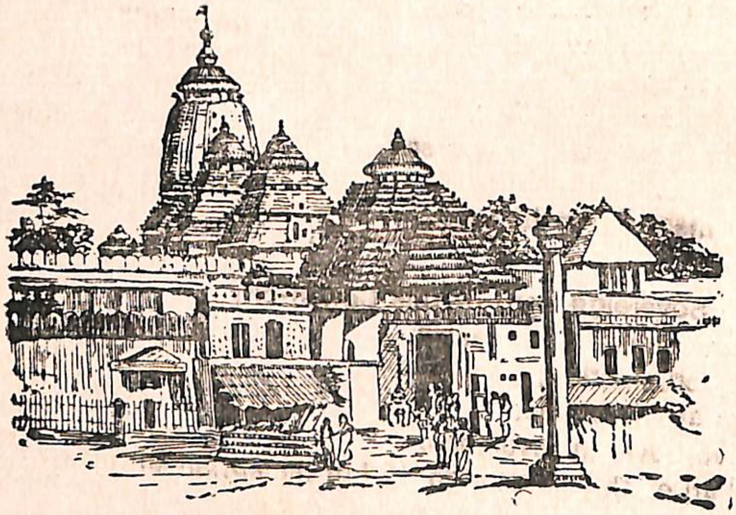

Khadi & Village Industries Play vital role in Rural Reconstruction

Dr. BENUDHAR BALIARSING

Orissa is the poorest State in India with *per capita* annual income of Rs. 435. Besides it has the maximum concentration of people living below the poverty line. These people whose *per capita* monthly expenditure is less than Rs. 33 constitute 62·04 per cent of the State's population. Thus Orissa possess a challange to the socialist planners, administrators and those who firmly believe in the call of 'Garibi Hatao' of our Prime Minister. Paradexically it is a State endowed with vast mineral and forest resources, and has a comparatively long coast line. Exploitation of mineral resources forms one of the major planks of Orissa's economic regeneration.

But ameliorating conditions of the teeming millions in rural Orissa, particularly those below the poverty line is a formidable task. Earnest efforts are being made to uplift the condition of these hopeless people in a decade's time and the proof positive of those efforts is the Economic Rehabilitation of the Rural Poor Programme launched only a year back. But the State Government's efforts to uplift the rural poor needs to be supplemented if rural development has to be achieved in the shortest possible time. Against this backdrop the importance of Khadi & Village Industries comes to the fore.

It is admitted on all hands that the Khadi programme, if effectively implemented will go a long way in meeting the challange of rural unemployment. Fortunately handlooms have flourished in the State as a cottage industry providing employment to nearly 3 lakh weavers scattered all over the State. The excellence of Orissa's/handloom fabrics bears testimony to the skill of our weavers, who mostly belong to the lowest rung of the society. However the industry is languishing because of poor supply of mill-made yarn and marketing facilities. Needless to coarse cloth is the apparel of most people in rural Orissa. So Khadi can easily fill the bill of pursued with vigour. Handspun yarn can come in handy for Orissa's skilled weavers. There is no denying the fact that Khadi Programme is primarily an employment generating programme and is capable of sustaining rural economy. The programme can be successfully geared to acheive the following ends viz., (1) as a relief programme in areas prone to drought, flood and cyclone, (2) as a sure means of livelihood for people living in hilly and backward areas where regular employment is hard to come by and (3) as a programme to rehabilitate the orthopaedically handicapped people.

Bulk of our rural people use coarse cloth which is now in short supply because textile mills find its production unremunerative in comparison to other varieties of cloth. Khadi can bridge the current gap between supply and demand in so far as coarse cloth is concerned. Looms are lying idle because of shortage of mill-made yarn. The 2 and 6 spindle new model Charkhas can meet the shortage while providing engagement to a large number of rural people.

Khadi production in Orissa has become poorer since the dissolution of the State Khadi & Village Industries Board in 1968. A few institutions that have remained are carrying on Khadi activities in the State.

There is vast scope for development of Khadi Spinning and Weaving in Orissa and production of Khadi cloth valued to the tune of Rs. 1 Crore a year is very much in the realm of feasibility. The reasons for which Khadi industry was so far languishing in Orissa were (1) lack of local initiative and leadership, (2) want of organisational set-up to cover the entire State, (3) non-availability of cotton in adequate quantity and of required quality, (4) dearth of technical personnel and (5) dependance on outside supply for tools and implements (especially spare parts for New Model Charkhas).

The reconstituted Orissa Khadi & Village Industries Board at the moment is determined to revive Khadi activities all over the State by opening one hundred N. M. C. spinning centres in phases to provide employment to fifty families in each Block during the remaining period of Sixth Plan. In order to achieve this end concerted efforts are being made to organize a number of registered institutions and societies. During the current year 12 spinning centre have already been started and New Model Charakha provided. Efforts are being made to start 20 more centres during the current year. In order to ensure regular supply of cotton, large quantity of cotton are being procured and stored in the Central godown. Arrangement are also being made to receive yarn and pay wages to spinners. This process of spinning and ultimately weaving by weaver will ultimately open up vast avenues of employment for rural unemployeds and give a boots of Cotton Cultivation in the State. Five Units will be organised to undertake production of Pallivastra. Besides 5 muslin centres will be organised shortly.

The State has a large number of traditional artisans with skill in different trades and raw materials are abundant. Judged in this context the potentiality for development of village industries in the State is immense. The Orissa Khadi & Village Industries Board is also striving hard to promote village industries by providing advanced technical know-how, finance, raw material and marketing facilities to make the village industries self-sufficient. The Board also helps village artisans to improve their working conditions and thereby increase the production. This activity has developed to a considerable degree self-employment among the village artisans and educated youth.

The Board has so far not only taken-up in right earnest promotion of Khadi, Silk and Tussar but also village industries like cane & bamboo splints, leather, lime, non-edible oils and soap-making. Cottage Match, Pottery both glazed and earthern, Carpentry & Blackamithy, Gur & Khandasari, Palm Gur and Palm leaf products, bee-keeping, fruit processing and preservation, hand-made paper, processing of cereals and pulses, edible oils, collection of forest plants and herbs for medicinal purpose, Gum and Rosins, Shellac. manufacture of Katha and installation of Gobar Gas Plants to over-come the shortage of fuel needed for domestic cooking purpose.

More than 2,000 Co-operative societies were formed in the State and large amounts of money were advanced to these societies for development of village Industries. Attempts are being made to get the village industries sector as an important sagment of the Sixth Plan both at the national and State levels. Numerous schemes are being formulated in persuance of the guidelines prepared by the Khadi & Village Industries Commission.

The last two years achievements under Khadi & Village Industries Sector would show the serious efforts made in this direction to generate more employment opportunity. During the financial year 1980-81 the production went up to Rs. 7·35 crores from Rs. 5·73 crores in 1979-80. So also the employment through Khadi & Village Industries went up to 65,000 in the year 1980-81 from 51,454 in the year 1979-80.

In the next five years the Board aims at providing employment to 2·5 lakhs persons living below the poverty line by investing Rs. 20 crores in Khadi and Village Industries Sector.

President, Orissa Khadi & Village
Industries Board, Bhubaneswar

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When 'Chaacha' Nehru acted in Children's Film

—O. JOS THOTTAN

For Pandit Jawaharlal Nehru, the rose bud symbolised the children of India—the flowers of tomorrow. Shri Jos Thottan, journalist and documentary producer narrates the incident when Panditji acted in a Children's Film produced by him.

In India, Pandit Jawaharlal Nehru is known as 'Chaacha Nehru' (Uncle Nehru) amongst the countless millions of children. And indeed, when they remember their 'Chaacha', they also remember his famous rose bud too. What else would have prompted a five-year old child in Bombay, way back in 1962, while his 'Chaacha' was alive, to drag his mother to the balcony-garden and show her a rose bud all the while shouting that 'Chaacha' Nehru has come to our house?

Earlier, in 1955 when I had an occasion to be in Teen Murti, his residence, I made some inquiries to find all about the story of the rose bud. According to the information I gathered, one day, his personal attendant had brought a bunch of roses to put in the flower vase. Nehru was about to leave. An ardent lover of nature, landscape and flowers, Nehru picked up a rose bud and put it in his button-hole. From that day he was particular that he should have a rose bud before he stepped out. I feel that Nehru might have symbolised the children of India with the rose bud—the flowers of tomorrow.

On examining a large number of photographs, from the time he became the President of the Indian National Congress, at Lahore, in 1929, I have come to the conclusion that the rose bud caught his imagination after he became the Prime Minister of India. As a Cameraman who shot a documentary film inside the Constituent Assembly Hall of India, on the midnight of August 14, 1947, during the solemn hour of freedom, I can positively say that the rose bud was not there. In a photograph in the company of Sardar Patel and Rajen Babu a few months after the death of Mahatma Gandhi he is seen without the rose bud. So I presume that he started sporting it somewhere about 1950. Any how, children of India identify him with the rose bud.

Once during an interview, Nehru said: "...I admit that I am fond of children and this fondness has increased with years." Nehru was at home in the company of children, for he strongly believed that children did not belong to groups or one or the other community or to a particular state or region. His love of children was a spontaneous outburst from the innermost depths of his soul. No wonder that children were attracted to him like iron filings to a magnet. In their presence, he was a child himself. And indeed, it was this love and concern for children, the inheritors of tomorrow's India that prompted 'Chaacha' Nehru to lay stress on science and technology for the generations to come, the fruits of which we have already started to enjoy. As a boy, his interest in science had already been stimulated by his Irish-born tutor who rigged up a small laboratory in 'Anand Bhavan' at Allahabad. Young Nehru was always stirred by curiosity. In 1909, he was with his father, Motilal Nehru in Germany, to see Count Zeppelin's dirigible airship. No wonder that he realised at an early age itself the potentiality of science and technology and when he became India's first Prime Minister, he gave priority to these twin levers with which he could lift up India from the depths of poverty and backwardness where it was deliberately kept by the British rulers.

"Well, I have always felt that the children of today will make the India of tomorrow" he had said once, adding that "the way we bring them up will determine the future of the country."

During December 1950, Nehru wrote in a journal: "The vast army of children all over the world, outwardly different in many ways, speaking different languages, wearing different types of clothes and yet, so very like one another. If you bring them together, they play or quarrel, but even their quarrel is some kind of play. They do not think of differences of class or caste or colour or status...". Was this a precursor to the birth of the non-aligned movement a few years later?

Once Chaacha Nehru stressed: "Children should have opportunities for development and they should have been given a proper lead. Before he completed his mission on earth, Chaacha Nehru established a chain of advanced technological and science institutions all over India to enable the children to choose their career according to their aptitude.

NEHRU—THE ACTOR

'Chaacha' Nehru's love and affection for children and his desire to make them happy could be clearly gauged from the following episode.

On July 26, 1950, I had the good fortune to show a set of nine documentary films in colour at Teen Murti, to all the foreign diplomats of Delhi and their families, who were invited to the screening by Panditji. Earlier Shrimati Indira Gandhi had previewed them. Panditji enjoyed the show, since the films were on his pet subjects of nature, wild life and scenic spots. Later, in 1955, I produced, directed and shot India's first children's film in colour, tentatively titled, 'Chandu—The Elephant Boy'. During the first week of August of the same year, I went to Teen Murti with a desire to show a few reels to 'Chaacha Nehru'.

I was waiting on the verandah, when he returned after an appointment. It was about 11 A. M. He asked me whether I have brought something to show him. Immediately, I showed him a 'still' from the children's film. He took it in his hands and beamed with joy... Suddenly he asked me; "You want me to act in your children's film ?" I was taken aback. "Come on", he said. Fortunately, I had my loaded camera with me. Instead of going up, Panditji straightaway walked towards the backyard and told his security staff to get his pet tiger cubs. Then he began to play with them and I recorded the scene in colour for the children of India and the world and posterity.

Perhaps, he wanted the children of India to see him playing like a child with his pets, even after his exist. That was the 'Chaacha Nehru' I witnessed.

Courtesy : P. I. B.

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The disease of the youth unrest : Its diagnosis and treatment

Dr. JAGANNATH MOHANTY

This is an age of science and technology, which has brought about the shrinkage of space and time. Greater communication and closer communion among human beings are imperative. Various mass media and different values shared by all civilizations and cultures promote such communication and communion which are essential not for day-to-day management of life, but also for enjoyment and enrichment of life. This is vitally significant in view if "a world without boarders" which is based on a vision of collaboration among all nations, different disciplines, philosophies of life and systems of values. Such a vision necessitates, the promotion and growth of the values for "conduct of life".

But unfortunately there are hazards in the communication media and crisis in the value-system. This has resulted in utter confusion among the youths who are harbingers of the future, creative in nature and non-conformist in spirit. This is called the "malaise of the young" mainly due to the gulf between the real world and the transformation taking place in a drastic rather chaotic manner. The modern youths are adversely affected by the attitude and conduct of the elders, who often flout ethical values and work for self-preservation and *status quo*. "This crisis of youth", observes Prof. Kabir, "is a permanent feature of human life. In every age and every society young people have tended to rebel against their elders". According to him such conflicts are found even among animals, but in the animal world, the struggle between young and old is centred round hunger and sex as the two essential conditions of individual and group survival. In the case of man, the conflict is due to many non-material factors. The elders are apt to forget that immense changes have taken place and even the most static of societies is not entirely static. As a matter of fact they expect that the youths of today should behave as they were young.

Diagnosis

The revolt of the youths is partly due to their desire to prove that they have become adults and are no longer dependant on their elders. On the other hand the parents and elders are under the impression that their children whatever may be their age are still in their earlier phase of dependence and helplessness. The youngs are becoming impatient to show their maturity and elders are slow to recognise the changed circumstances. Rather the elders desire to dominate as in the past provokes aggressive reactions in the young and make the transition too difficult to pass.

The ill-effects of mass media like radio, films, television etc. are also responsible for the conflict between the young and elders. Unhealthy models and false personification have been provided by these media to the modern youths who are not yet mature and balanced. They are misled and ilusioned and find themselves in dungeons and dark holes from which escape is either difficult or too late.

Such conflict may also be attributed to the ageless problem of relationship of the individual to nature and to society. Man is always in tense to acquire mastery over nature and in trouble by the social relationships. His freedom is checked by a large number of inhibitions and restrictions. He faces problem, demands a fresh adjustment which varies from individual to individual, from society to society and from age to age. This creates conflicts in the minds of the young and with the elders in general.

The influence of the peer group is insurmountable. The youths are apt to forget the earlier relations with the parents and prefer their friends' help to their elders. They take their friends as real well-wishers, though most of them may be friends of the sunshine and hypocrites.

Although revolt against the elders is natural for the young, their negative attitude resulted out of cynicism and frustration so peculiar to the modern age. The modern youths like their predecessors reflect the traditional values and authority, but unlike them do not try to set up a new social order of their own design and ideals. This is the most disappointing state of affairs.

There are conflicts of values for example, traditional values of a society with those of the another and traditional values with the modern values in the same society. Values of one culture cannot pull on well with those of the other. But blind imitation of values will create confusion as well as conflicts.

Science shatters the old values and uproots the blind superstitions. It is also largely responsible for the growth of a questioning attitude and sceptic view points. Although peace, progress and prosperity of the mankind are the promises of the age of science, in practice there are many a slip between the cup and the lip.

Materialistic and mechanistic philosophy of life has many adverse effects on the modern youths. Immediate gain, physical good and economic welfare are mostly desired by the materialistic minded people who do not believe anything beyond their sight and experiences. Marxian principles of dialectical materialism are for example used for explaining the human conduct and social actions.

Lack of ethical values among the elders, parents, politicians, businessmen, industrialists has set very bad examples before the young generation. These superiors now occupying important positions in the society—Government, administration politics, education and so on mislead youths to wrong doings and thinkings and create violent and anti-social conditions amounting to colossal wastage of national resources and youthful energy.

Lastly, academic and moral leadership is not forthcoming from the morden teachers. The yong have little or no confidence in their judgement and integrity. When youths find their teachers failing their duties and negelecting their responsibilities, they do not owe their allegiance and loyalty to them. Further, their sense of insecurity and loss of confidence increase the revolting spirit in the young.

Treatment

The crisis of youth and value-system demands the study of human behaviour or character-formation which is called ethology. Most of the reasons as enunciated above for revolt are psychological as well as ethological. The feeling of adulthood, influence of peer-group, attitude of cynicism and negation, mechanistic conception, materialistic philosophy of life etc, are at the root of demolition of the traditional values and old social order. Unless a new social order based on freedom, initiative, responsibility, fellow-feeling, awareness, faith, confidence, security and moral conduct is established, rebelliousness among the young will persist or rather aggravate.

Due to annihilation of time and space all human beings are neighbours. Previously, different societies were living in isolation and a problem in one country was not affecting the other. But now all are linked in one common fate either for good or bad. A danger to one community is a threat to the entire humanity. Prof. Kabir has rightly remarked, "Internally and externally, societies must march forward to peace and prosperity in unison or tread together the path to destruction and death".

The means of transport and media of communication should be made free from hazards both physical and human. The free-flow of materials as well as ideas will help spreading enlightenment and awareness. Mankind cannot survive without values and ideals. Therefore, faith in values is to be revived and scientific humanism is to be promoted. Rationality not authoritarian spirit should govern the code of human conduct. Truth, beauty and goodness are the values of more permanent nature which inspire man to act with courage and sacrifice. But for this knowledge of the internal and external nature is essential. The Socratic dictum "Know thyself" or "knowledge is virtue" is of greater significance in the modern world.

Youths of today should be committed to the value of truth and justice, compassion and understanding. Adequate identification with the suffering and ailing humanity will help them to resist the forces of narrow parochialism and sectional interests. Our knowledge of science and technology should be used not for destruction, but for creative purposes and we should be inspired by the lofty ideals and values of our hoary culture.

The elders, particularly politicians should not influence the young generation adversely. They should not utilise rather misutilise their youthful sprit and vigour for their own self-interest and narrow commitments. The modern youths should also be clever and wise enough not to be used as scapegoats at the hands of these people with corrupt and vested interests.

Education at all levels should be democratised, so that creative potentialities of youths can be liberated and their action as well as thought be relieved from collective psychoses and individual inertia. Modern youths must realize that they fulfil themselves in and through creation. Their creative faculties can flourish only through freedom and excellence. Science must be harnessed for the welfare of the mankind committed to high cultural and spiritual values. The modern human mind must be receptive to new ideas and new vaules, but it should not be led astray and blown by the whirl winds. The youths of today must follow the Vedic precepts, "Let noble thoughts come from all sources" (Ano Bhadra Kratu Biswatah) and invoke celestial blessings in true sense of education.

> "Lead us from the unreal to the real,
> from darkness into Light and from
> death unto Immortality".

Asatoma sadgamaya, tamasoma Yotirgamaya, Mrityrmaamrutamgamaya)

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Orissa Pavilion in India International Trade Fair, 1981, New Delhi

SHRI BISWARANJAN DAP

Orissa Pavilion was located on a 1078 square meter of long plot with road on three sides and very near to Gate No. 1. It was surrounded by Pavilions of Ministry of Information and Broadcasting, Ministry of Shipping and Ports, Fertiliser Corporation of India, Government of Bihar, West Bengal and Tamilnadu.

Though worked with a low budget of Rs. 8·75 lakhs (cost of other State Pavilions varied between 20 to 60 lakhs), Orissa Pavilion was this time, a successful blending of traditional Orissan art with modern design that signled it out amidst high rise Pavilions in the vicinity. The Pavilion was a combination of two hexagons and one trapezoid halls maintaining different heights and levels. Multiwell three sided facade was covered with murals in gold and vibrant yet subtle blend of colours depiciting the rich legacy of ancient civilisation and the emerging industrial Orissa. Two and half feet high wood carving of Sri Jagannath, Balabhadra and Subhadra, the ruling deities of Orissa and symbol of National integration adorned the Central place of the facade and maintained their abiding influence on the passing visitors. Konark wheel and colourful applique tapestry also formed a part of the facade. Added to all these, a life size clay model of Konark horse and a matching landscape with pool and fountain not only enriched the decor of the pavilion as a whole but also presented an attractive look from the Pavilions around.

In a fantasy of light and shade lawns of the Orissa Pavilion, remained packed with visitors of all ages relaking and enjoying the panorama of the Pavilion and around. While children played hide and seez with the Konark Horse, parents relaxed over cups of tea. Cameras clicked to capture the mood with friend and relatives standing by Shri Jagannath, Konark Horse or Dancer as they might have done in a sight seeing spree of Konark and Puri. Many visitors had no time to get inside Pavilions; for them facade of Orissa Pavilion could provide an interesting and dazzling panorama of Orissa with a distinction of its own. It did not deprive the Prime Minister either who could not make time to visit State Pavilions and was shown round the Trade Fair in haste.

Orissa Pavilion was declared open to the visitors at 10-00 A. M. on November, 14, 1981, with inauguration of the Trade Fair by Vice-President of India, Shri Hidayatullah. Orissa being one of the few pavilions opened in time was greeted by happy and gay visitors in large numbers who left their good wishes for having opened on the first day. Orissa Day was Celebrated on November 16, 1981 in Pragati Rangamancha inside Trade Fair. The cultural Troupe from Orissa presented classical Odissi Dance and Danda Nata. Distinguished visitors and high officials graced the occassion. Shri Brajamohan Mohanty, Union Deputy Minister for Supply encouraged the artists by remaining present to witness the programmes.

Orissa Pavilion presented to its visitors a representative Orissa in a miniature form. Land and people, heritage, tourist spots, rich forest and mineral wealth, wild life, artistic handlooms and hadicarafts on one side and the developing Orissa with projects, small scale units, medium and large industries, economic rehabilitation of rural poor, tribals and harijans—all were aesthetically and effectively displayed through large colour and Black and white blow-ups, translights, light and sound show, Konark T. V. with vidio tape link, machineries and products. Screening of films included "Princess Khairi" and "Odissi Dance". Free flowing type winding pathway carried the visitors from the entrance till the exit. Guides and officials present attended querries of the visitors.

Trade delegations from Vietnam, Abu Dhabi, Tunisia, Mozambique and Loas visited Orissa Pavilion on the first day and evinced keen interest in the handloom and handicrafts. This was followed by delegations from Saudi Arabia, Denmark and Finland who liked Handicrafts and Rural Crafts most. Independent enquiries were received from United Iron and Steel concern, Kathmandu, for electrodes and pipes, from Pakistan Electron Limited, Lahore, for tranformer, from Farooq, Manufacturing works, Karachi, for cast Iron pipes and firm K. Trading Co., Chittagong, for P. V. C and C. I. Pipes. Enquiries of firms in India were for export oriented products like handlooms, handicrafts, woodcarvings, metalware, carpets, pharmaceuticals, medicines and white metal products. A New Delhi based trader, with branches in six cities outside the contry, evinced keen interest in hadicrafts for export. He wanted to buy the life size clay model of Konark Horse and Konark wheel which formed part of the facade.

125 Trade enquries for industrial products from entreprenueres and 12 from traders for forest produces and timbers were passed on immediately to the corporations concerned for follow-up action. Export Manager of the Orissa Small Industrie Corporation, took up many of the cases with local traders as well as foreign traders visiting the Trade Fair out of their own initiative. Product enquiries were mainly for detergents, P. V. C. and Cast Iron pipes, Silca Gel, Polythene Sheet, Door and Window fittings, Graphite Crucibles, pipe blending machine and Kalinga Fan.

Young entrepreneurs expressed their desire to set up factories in Orissa by availing the incentives and liberalised industrial policy. These were wood Based Industry, Granite Cutting and Polishing unit, Carksheet, Railway Track parts, cooling Towers, Industrial Filters, Hydrated Lime Unit, Mini Cement Factory, Ancillary industries near NALCO and FCI. These were passed on to IPICOL for further negotiation. One consultancy firm wanted to have a copy of latest survey report on Sukinda Nickel Project so that their foreign Principals could submit tender for mining and refining nickel in Orissa. This was immediately passed on to the Director of Mines for necessary action.

9. Sale Counters were opened by Orissa Handloom Development Corporation, Orissa Co-operative Handicrafts Corporation and Orissa Khadi and Village Industries Board with discounts varrying 10 to 20 per cent, net sale was roughly as follows:—

Handloom ..	Rs. 95,000	Rs. 1,86,800
Handicrafts ..	Rs. 50,000	
Khadi and Village Industries ..	Rs. 40,000	
Forest Products (Honey and Pickle)	Rs. 1,800	

There was a general feeling among visitors that Orissan Hondloom Sarees were Costly in comparision to Sarees available in other State Pavilions. This necessiated customer guidance and customer information to boost up sale. It was arranged with the visiting teams of "Delhi Doordarshan" and "Delhi Juba Vani" and Delhi people were explained through interviews that "products from Orissa are imaginative creations having bold pattern of vibrant yet subtle blend of colours with luxuriant feel of texture. If the charm of aesthetic design and utilitarian aspect of tie-and-dye Sarees are accounted for, Orissan Sarees would be economical than similar products now made in other parts of the country." Suitable explanation had to be given to visitors who hold opinion that the present trend is for new and varried design with low cost. There was visible impact of this customer information service as was observed by the Guides when they moved inside Trade Fair with dazzling Khandua Saree worn as uniform.

They had to meet visitors querries.

Shri J. B. Patnaik, Chief Minister, Orissa visited the Pavilion on November 23, 1981 and some improvements were done according to his advice. Capt. Williamson A. Sangma, Chief Minister, Meghalay visited the Pavilion on November 30, 1981 and the honourable vistior was acquainted with what Orissa is doing for the tribals. The Chief Minister expressed happiness over the progress made under the present Government. Shri Mohammad Yunus, Chairman, Trade Fair Authority of India, Shri Somnath Rath, Speaker, Shri Basanta Kumar Biswal, Shri Dayanidhi Nayak, Shri Niranjan Patnaik, Shri Raghunath Patnaik, Shri Habibulla Khan, Shri Jugal Kishore Patnaik, Shri Lalitmohan Gandhi, Ministers from Orissa, M. Ps. and M. L. As., High Officials of Government of India and State Governments, technocrats and enterprenuers visited the Pavilion. Many of them passed some time in the Pavilion taking to other dignitories and visitiors, gathering their views and experience.

The Trade Fair, which attracted more than 3 million visitors during its 21 day schedule, was declared closed in a solemn function on December 5, 1981. In his closing speech Shri Mohammad Yunus, Chairman of the Trade Fair Authority of India, mentioned that the Trade Fair has helped India to have a transaction of Rs. 500 crores worth of products and has paved the way for concrete negotiation with other countries. Nearly 7,500 trade enquiries were received in various pavilions during the Fair.

In all 39 Foreign Countries, 24 foreign companies, 17 Central Ministries and Departments, 29 State Government and Union Territories, 42 Public Sector undertakings and Export Promotion Councils and 76 Private Companies participated in India International Trade Fair, 1981.

Senior MaintenaceOfficer-*cum*-
Officer-in-charge
Orissa Pavilion, India International
Trade Fair, 1931, New Delhi.

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HORTICULTURE

(Brief Note on achievement till the end of October, 1981)

1. Banana Package Programme

160 hectares have been brought under compact area plantation in cultivators' field under the subsidy programme. (Target—200 hectares).

2. Pineapple Development

38·80 hectares under the existing plantation are being maintained. Besides 6 hectares have been brought under pineapple cultivation in compact areas in cultivators' fields under subsidy programme. (Target—8 hectares).

3. Fruit Technology

So far 6,242 housewives have been trained in techniques of preservation of different fruits and vegetabels.

4. Coconut Extension and Development

403,608 numbers of Coconut Seednuts have been collected for raising seedlings. 234,409 numbers of Coconut Seednuts have been put in bed for raising seedlings. Besides 150,000 Coconut Seedlings raised earlier have been distributed for plantation. Besides, 9,000 coconut plantation have been made in non-traditional areas (Target—Collection of 8 lakh seednuts) Non-traditional area plantation—11,000.

5. T X D Coconut Nursery

20,389 T X D Coconut Seednuts have been collected for raising T X D Coconut Seedlings. (Target—Collection of 25,000 Seednuts).

6. School of Horticulture

30 Grafters and 60 Gardeners are undergoing training on horticulture plantation. (Target—60 Garfters and 60 Gardeners).

7. Quality Planting Materials

337 hectares in different fruit orchards have been maintained. 199,129 Seedlings have been raised and 75,390 Grafts and Gooties have been prepared for distribution. (Target—Poduction of 1·85 lakh planting materials).

8. Fruit Development

25 numbers of new Transit Nurseries have been established and through these Transit Nurseries 31,500 planting materials have been sold. In addition to this 268,500 Grafts and supplings have been distributed under the programme of " A tree for every child ". Besides, 20·50 hectares have been brought under Papaya cultivation.

347,000 citrus plants have been planted in Mahendragiri Podu ravaged area. 2,000 hectares belonging to tribal farmers have been covered under the programme. Besides, 28,000 Kagzi lime plants have been planted in Sergad area and 26,000 Orange plants in Malkangiri. (Target—Establishment of new Transit Nurseries—25Nos., Plantation nucelar plants—135 lakhs. Papaya cultivation—52 hectares).

9. Insitu Plantation

20,000 hectares brought earlier under Insitu plantation are being maintained. Besides 3·00 lakhs Mango side grafting have been taken up under Insitu Programme. (Target — Maintenance of old plantation—20,000 hectares).

10. Financial Achievement

So far 46·62 lakhs have been spent out of Rs. 150·05 lakhs sanctioned amount till the end of October, 1981.

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RS. 30 CRORE LOW PHOS PIG IRON AND FERRO-VANADIUM JOINT SECTOR PROJECT AT RAIRANGPUR.

IPICOL has signed a joint sector Agreement on November 18 with M/s. Indian Metals and Ferro Alloys Ltd., to set up a Rs. 30 crore project in Rairangpur, for manufacture of Low Phos Pig Iron and Ferro vanadium. The project would provide direct employment to 750 persons and generate employment opportunities for about 2000 persons. This project is expected to go into production by 1984.

Low phos pig iron and Ferro-vanadium are the strategic materials required for Iron and steel and Engineering industries. Besides, these would cater to the requirement of the Defence Organizations. Ferro vanadium would be an important substitute.

From the Editor

The December issue of Orissa Review has been planned as a special issue on the Agriculture and Allied Sector.

The Third Indian Agricultural Congress is being held at Bhubaneswar in the first week of January, 1982.

Agriculture forms the back bone of the Indian Economy. More than eighty per cent of the Indian population are engaged in agriculture and the future of this country, may the entire planet depends on a scientific and planned development of agriculture to meet the rising demand of the population, both in quantity and quality. Agriculture needs to be nursed with care and understanding. Scientific management of the agriculture sector and finding adequate resources for its development is the need of the decade.

While welcoming the delegates to the Conference to this Temple-city of Orissa, we hope that the Conference will be a beacon light in the field of agriculture.

Orissa Review extends its greetings for the New Year to its readers and contributors and hope that this year will bring prosperity galore to Orissa.

Satyananda Champatiray

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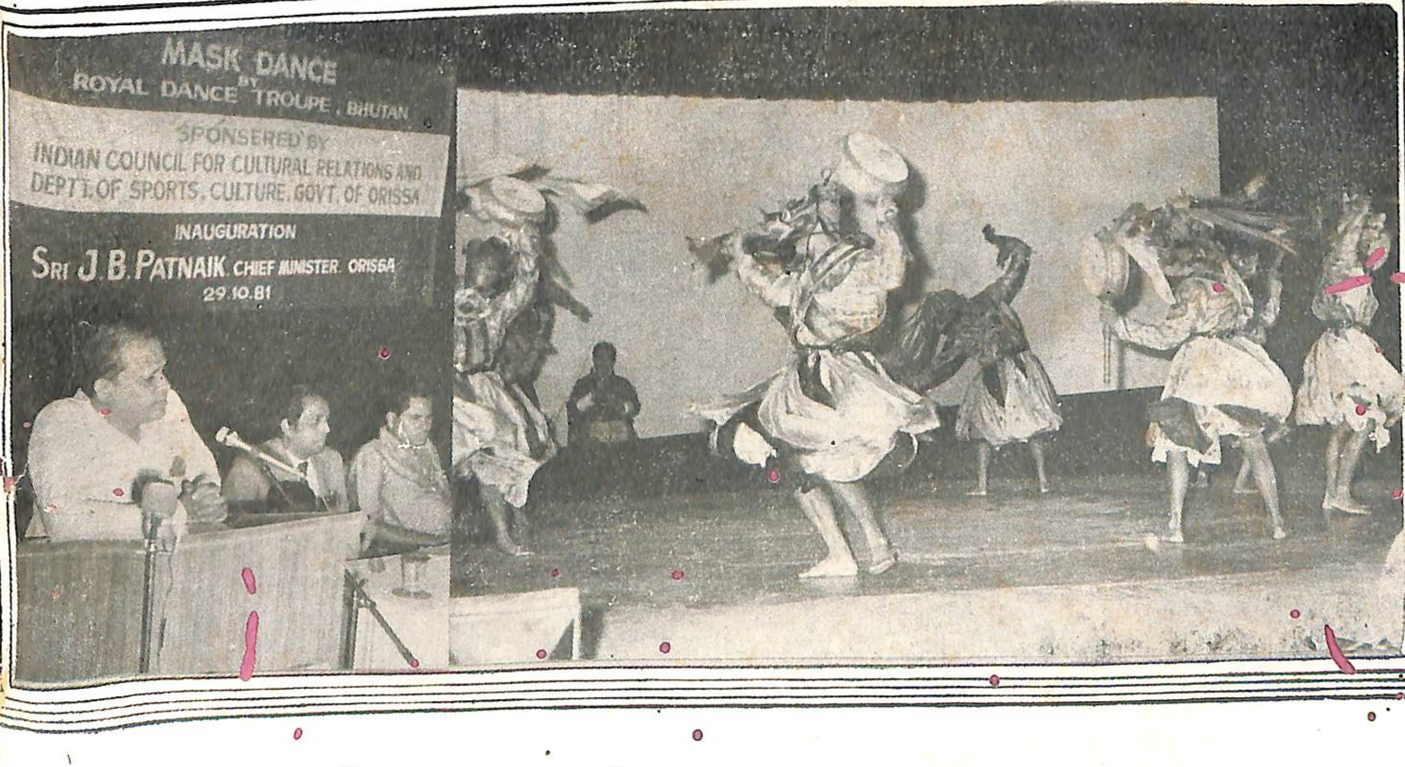
The Divine Triangle of Orissa

Shri C. M. Poonacha, Governor of Orissa addressing the audience at a public meeting held on the occasion of 83rd birthday of Dr. H. K. Mahtab at Bhuban[illegible] Nov. 21, 198[illegible].

The 33rd National Cadet Corps Day was celebrated at Satyabrata Stadium, Cuttack on November 22, 1981

Photo shows the Chief Minister Shri J. B. Patnaik inspecting the Ceremonial Parade held on the occasion

Mask dance by Royal Dance Group, Bhutan being inaugurated by Chief Minister, Shri J. B. Patnaik at Rabindra Mandap, Bhubaneswar on October 29, 1981


MASK DANCE
BY
ROYAL DANCE TROUPE, BHUTAN
SPONSERED BY
INDIAN COUNCIL FOR CULTURAL RELATIONS AND
DEPTT. OF SPORTS, CULTURE, GOVT. OF ORISSA
INAUGURATION
SRI J. B. PATNAIK. CHIEF MINISTER. ORISSA
29.10.81

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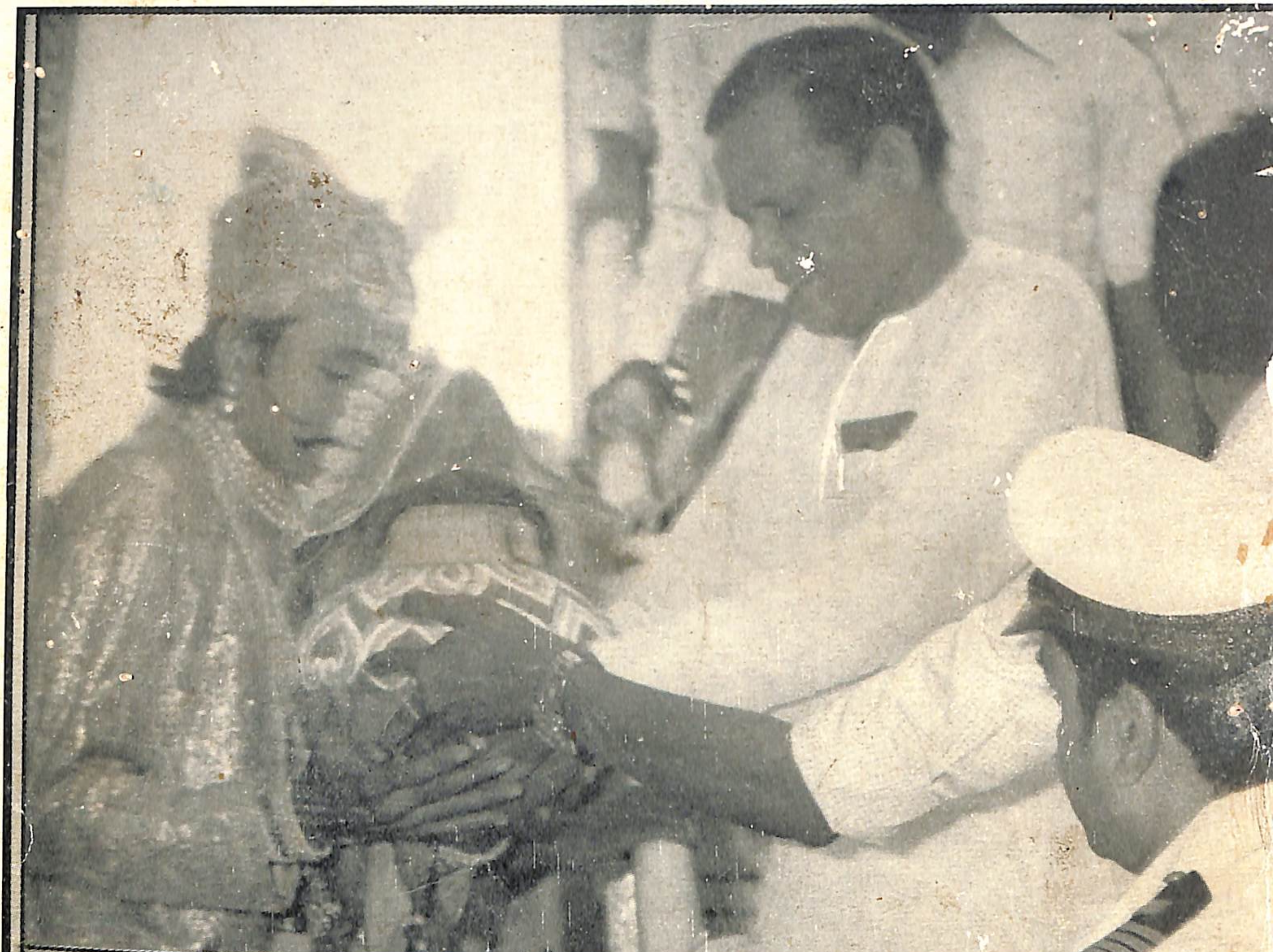

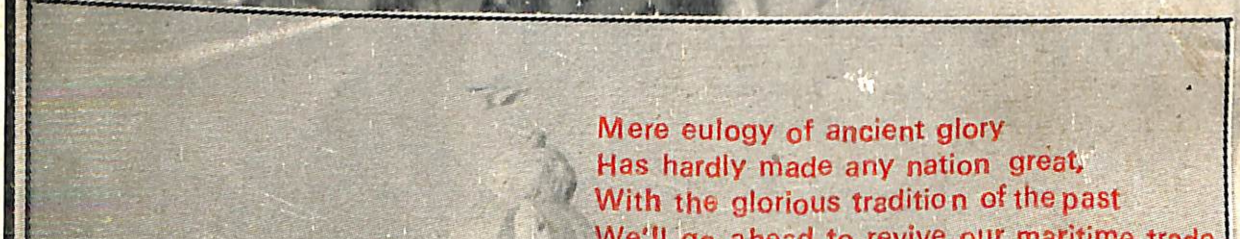

Mere eulogy of ancient glory
Has hardly made any nation great,
With the glorious tradition of the past
We'll go ahead to revive our maritime trade.

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